Calgary River Valleys Plan

The Plan and Policies

THE CITY OF CALGARY
PLANNING DEPARTMENT

SEPTEMBER 1981

PUBLISHING INFORMATION

TITLE:	CALGARY RIVER VALLEYS PLAN - THE PLAN AND POLICIES
AUTHOR:	SPECIAL PROJECTS DIVISION
STATUS:	CPC - END OF OCTOBER 1981 (TENTATIVE) COUNCIL - END OF NOVEMBER 1981 (TENTATIVE)
PRINTING DATE:	SEPTEMBER 1981
ADDITIONAL COPIES:	THE CITY OF CALGARY PLANNING INFORMATION CENTRE P.O. BOX 2100 CALGARY, ALBERTA T2P 2M5 (403) 268-5360
COMMENTS:	A SEPARATE DOCUMENT OF SUPPORTING INFORMATION IS ALSO AVAILABLE BACKGROUND INFORMATION IS AVAILABLE IN TWO PARTS: - LAND USE INVENTORY AND ANALYSIS - DEVELOPMENT OF POLICIES

EXECUTIVE SUMMARY

INTRODUCTION

The Calgary River Valleys Plan, which was initiated in 1978, contains a comprehensive range of policies to establish a coordinated approach, over a 20 year period, to the development, use, and conservation of Calgary's rivers/creeks and immediately adjacent lands. The ultimate aim of the Plan is to:

- create a comprehensive open space system in the river/creek valleys and provide diverse, year round recreational uses for the enjoyment and benefit of citizens now and in the future;
- provide for residential and compatible commercial/ industrial development; and
- reduce potential flood damages.

IMPLEMENTATION

Recommended acquisition of approximately 1150 acres (467 ha) of land for regional parks and recreational facilities in the river/creek valleys at an estimated cost of $68.5 million (1981 dollars) is based on priorities developed as a result of the study. Development of regional parks and recreational facilities in the river/ creek valleys is estimated to cost $38.5 million (1981 dollars). In order to facilitate the implementation of a land acquisition program, City Council is asked to authorize the Civic Administration to request the Provincial Government for financial assistance.

The Plan includes strategies to reduce potential flood damage and to effectively control development in all areas subject to flooding. Only compatible land uses are to be allowed in the floodway, i.e. open space uses such as parks and golf courses, as the floodway is critically needed to allow the passage of a major flood. No buildings or other structures are to be permitted in the floodway unless they are non-obstructing. Development (building) setbacks will be insituted from the edges of the city's watercourses.

To avoid environmental damage, major transportation corridors should be routed away from the river/creek valleys where possible. In addition, adequate rights-of-way should be retained for transportation corridors to avoid encroachment onto creek/riverbank parkland when these roadways are upgraded.

The plan also addresses water-based recreation, and the improvement of the quality of water in the city's watercourses through monitoring the water quality on a regular basis. In consultation with the Alberta Department of the Environment, advanced wastewater technology will be applied on an ongoing basis. Additionally, ongoing liaison with the Alberta Department of the Environment regarding matters related to the management and development of the city's watercourses will be required particularly with respect to improving the water quality and enhancing the overall riverine environment.

To enhance the riverine environment, distinctive natural features (e.g. islands, escarpments) and historical resources (e.g. archaeological sites) will be preserved. In addition, both banks of the Bow River adjacent to the downtown between Louise Bridge and the Zoo islands will be beautified.

As a follow-up to the approval of the Plan, it will be ensured that Policy Reports and Plans initiated by the City affecting the river/creek valleys comply with and reinforce the policies of this plan. Further, to effectively implement the Calgary River Valleys Plan, appropriate policies will be incorporated into the Land Use By-law and the Calgary General Municipal Plan.

CONCLUSION

Approval of the Plan will provide a guide for land acquisition and development in the river/creek valleys over the next twenty years.

NOSE HILL DRIVE

CROWCHILD TRAIL

SARCEE TR.

SHAGANAPPI TRAIL

CHARLESWOOD DR.

EVENTUAL LINK TO BEARSPAW

32 AVE N.W.

OLD BANFF COACH

BEDDINGTON TRAIL

BERKSHIRE BLVD

96 AVE

DEERFOOT TRAIL

112 AVE

NOSE CREEK

CALGARY INTERNATIONAL AIRPORT

64 AVE N.E.

McKNIGHT BLVD.

32 AVE N.E.

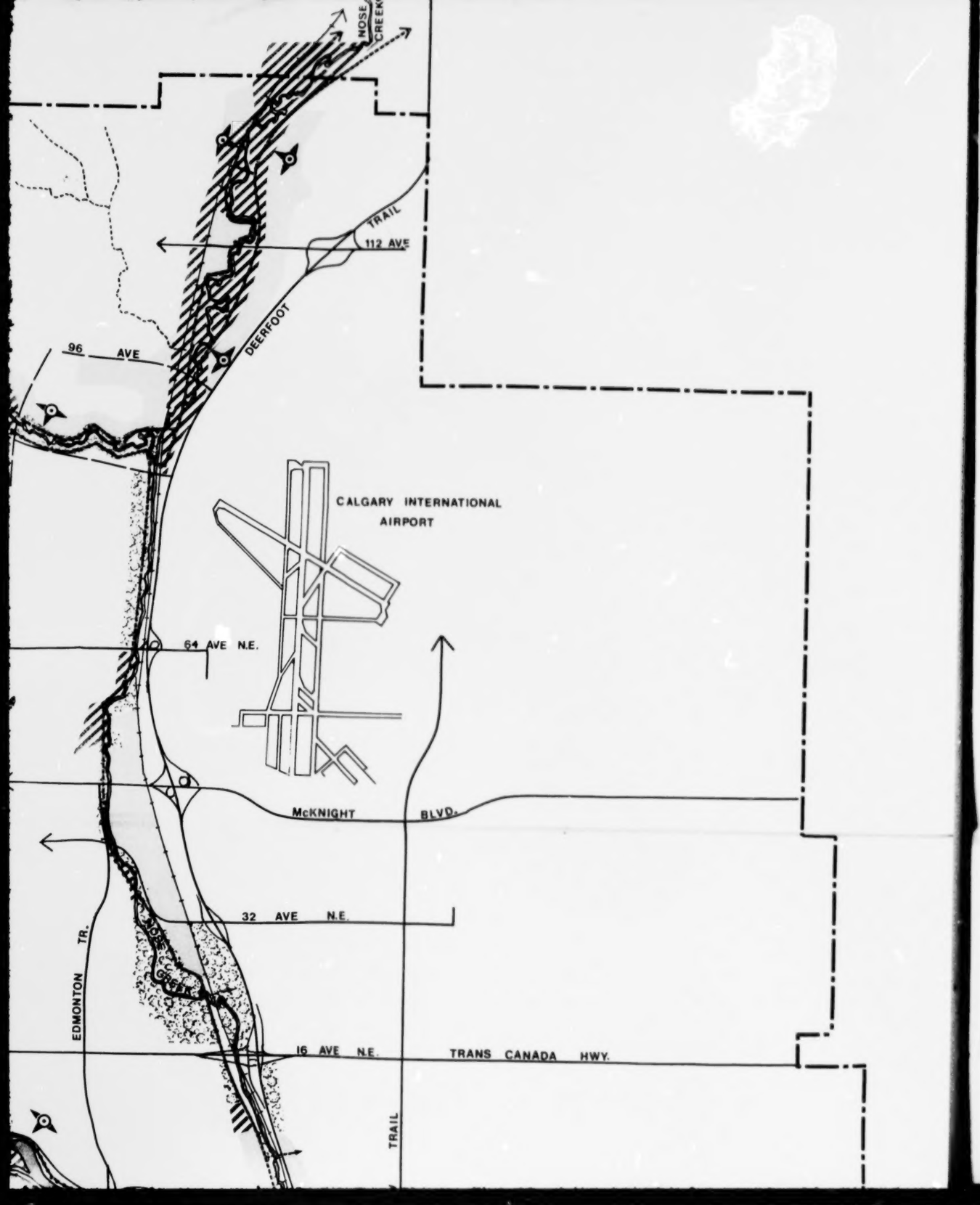
EDMONTON TR.

16 AVE. N.W.

16 AVE N.E.

TRANS CANADA HWY.

TRAIL


MOSE CREEK
TRAIL
112 AVE
DEERFOOT
96 AVE
CALGARY INTERNATIONAL
AIRPORT
64 AVE N.E.
McKNIGHT BLVD.
32 AVE N.E.
EDMONTON TR.
MOSE CREEK
16 AVE N.E.
TRANS CANADA HWY.
TRAIL

Calgary River Valleys Plan

THE CITY OF CALGARY
PLANNING DEPARTMENT

SEPTEMBER 1981

BARLOW
MEMORIAL DR. E.
17 AVE. S.E.
STAMPEDE GROUNDS
C.N.R.
BLACKFOOT TRAIL
LINE
OGDEN RD. S.E.
DEERFOOT TRAIL
GLENMORE TRAIL
C.P.R.
THLAND DR.
DERSON RD.
NYON MEADOWS DRIVE
BOW

THE CITY OF CALGARY
PLANNING DEPARTMENT

SEPTEMBER 1981

Calgary River Valleys Plan
`Plan Overview´

PROPOSED

- CITY LIMITS
- EXISTING ROADWAYS
- PROPOSED ROADWAYS/L.R.T. LINE (OPTIONS)
- EXISTING WALKWAYS/PATHWAYS
- PROPOSED WALKWAYS/PATHWAYS - LOW PRIORITY
- PROPOSED WALKWAYS/PATHWAYS - HIGH PRIORITY
- EXISTING REGIONAL PARKS/OPEN SPACE/ GOLF COURSES
- PROPOSED REGIONAL PARKS/OPEN SPACE/ GOLF COURSES/POTENTIAL ENVIRONMENTAL RESERVE
- PROPOSED NATURAL AREAS
- RESIDENTIAL
- INDUSTRIAL/COMMERCIAL (EMPLOYMENT DISTRICT)
- SEWAGE TREATMENT PLANT
- WATER TREATMENT PLANT
- POTENTIAL PUBLIC VIEWPOINT
- POTENTIAL CANOE LAUNCHING SITE

N

Scale: 1" = 4,000'

ELBOW RIVER
GLENMORE TRAIL
LINK TO GLENMORE PARK WALKWAY/PATHWAY SYSTEM
50 AVE
CALGARY COUNTRY GOLF & CLUB
ELBOW DRIVE
L.R.T. LINE
BLACKFOOT TRA
OGDEN RD. S.E.
DEERFOOT TRAIL
HERITAGE DR.
ELBOW TRAIL S.W.
SOUTHLAND DR.
MACLEOD TRAIL
14 STREET S.W.
ANDERSON RD.
CANYON MEADOWS DRIVE
FISH CREEK
BOW BOTTOM TRAIL
TO FISH CREEK PARK WALKWAY/PATHWAY SYSTEM
HWY. 22

ANYON MEADOWS DRIVE

TO FISH CREEK PARK

L.R.T. LINE

BLACKFOOT TRAIL

OGDEN RD. S.E.

DEERFOOT TRAIL

GLENMORE TRAIL

C.P.R.

OUTHLAND DR.

ANDERSON RD.

BOW BOTTOM TRAIL

CANYON MEADOWS DRIVE

TO FISH CREEK PARK WALKWAY/PATHWAY SYSTEM

FISH CREEK

DEERFOOT TRAIL

HWY. 22

TABLE OF

A. BACKGROUND 1 - 2

B. OVERALL PLAN OBJECTIVES 4

C. RECOMMENDATIONS 5-17

1. LAND USE PLANNING 5-15

i) OPEN SPACE IN THE RIVER/CREEK VALLEYS 5-11
a) REGIONAL OPEN SPACE 5-6
b) PUBLIC ACCESS 6-7
c) NATURAL AREAS 7-11

ii) FLOODPLAIN MANAGEMENT 11-15
a) FLOODPLAIN MANAGEMENT POLICY 12-14
b) ADVISORY GUIDELINES FOR NEW DEVELOPMENT OR REDEVELOPMENT IN THE FLOODPLAIN 14-15
c) POLICY GUIDELINES FOR THE REMOVAL OF INCOMPATIBLE RIVERSIDE LAND USES 15

iii) TRANSPORTATION CORRIDORS ADJACENT TO THE WATERCOURSES 15

CONTENTS

2. WATER RELATED CONSIDERATIONS 15-16

i) WATER-BASED RECREATION 15
ii) WATER QUALITY 15
iii) WATER FLOW LEVELS 16

3. PRESERVATION AND ENHANCEMENT OF THE RIVERINE ENVIRONMENT 16

i) AESTHETICS 16
ii) NATURAL FEATURES 16
iii) ARCHAEOLOGICAL SITES 16
iv) SNOW DISPOSAL 16
v) DISTURBED AREAS 16
vi) RIVERBANK EROSION 16

4. PUBLIC AWARENESS 17

i) HAZARDS AND GENERAL INFORMATION RELATED TO THE WATERCOURSES AND ADJACENT CITY PARKS 17
ii) SOCIALLY UNACCEPTABLE BEHAVIOUR 17

D. IMPLEMENTATION: PROCEDURES, PRIORITIES, AND COST ESTIMATES 18-25

LAND USE CONCEPT PLANS: PLATES 1. - 4. BOW RIVER
PLATE - 5. ELBOW RIVER
PLATE - 6. NOSE CREEK
PLATE - 7. WEST NOSE CREEK

A BACKGROUND

The City of Calgary wishes to express special appreciation to the Minister of the Alberta Department of the Environment for providing financial assistance for the preparation of the Calgary River Valleys Plan. As well, the City Planning Department is most grateful for the time and efforts expended by the Public Participation Branch of the Department of the Environment and the representatives of the Calgary River Management Citizens' Group in assisting in the organization of public meetings and Open Houses which were invaluable to the study.

Appreciation is extended to the Calgary River Management Advisory Committee* for their advisory directions related to the development, use and conservation of Calgary's watercourses and immediately adjacent lands, and for providing the vehicle for public input to the study. The City of Calgary Planning Department is also indebted to the Calgary River Management Citizens' Group whose liaison with the general public through the Calgary River Management Advisory Committee contributed valuable public input to the study.

*Calgary River Management Advisory Committee

Mr. A. McMillan Chairman	Water Resources Management Division	Alberta Department of the Environment
Mr. J.E. Glenn	Planning Division	
Mr. D. Anderson	Public Participation Branch	
Mr. K. Exner	Water Quality Control Branch	
Mr. J.E. Hutton	Planning Department	City of Calgary
Mr. D. Bolger	Transportation Department	
Mr. D. Kalinovich	Parks/Recreation Department	
Mr. I. Khan	Engineering Department	
Mr. K. Persson C.R.M.C.G. Chairman	Citizen	Elected by the Calgary River Management Citizens' Group
Mrs. M. Lounds	Citizen	
Mr. F. Krueger	Citizen	
Mr. A. Munz	Citizen	

In June 1974, the Bow River Study Committee presented a "Report" dated January 1974 to City Council recommending that a committee be established to advise the City of Calgary and the Province on the management of Calgary's watercourses and immediately adjacent lands. City Council approved the report, in principle, with amendments recommended by the Civic Administration, and the Calgary River Management Advisory Committee was formed. As recommended by the Advisory Committee an overall study was conducted to establish a coordinated approach to the development, use and conservation of Calgary's watercourses and immediately adjacent lands.

The Calgary River Valleys Plan was a joint project of the City of Calgary and the Alberta Department of the Environment on an equal cost sharing basis for the period January 1, 1978 to March 31, 1980. The Plan boundaries were based on the Plan Objectives approved by the Calgary River Management Advisory Committee. However, due to the broad scope of the study and the diversity of land uses in the river and creek valleys, it is not possible to create precise plan boundaries and, therefore, these boundaries are flexible. They encompass the Bow River, the Elbow River up to the Glenmore Dam Bridge Road, as instructed by City Council, Nose and West Nose Creeks, and lands immediately adjacent to these watercourses. It should be noted that the City Parks/Recreation Department has initiated a "Master Plan" for the entire area beyond the Glenmore Dam Bridge Road up to the west end of the Glenmore Park area. Furthermore, the "Nose Creek Concept Plan" (80 Avenue N.E. to the Bow River), approved by City Council on March 9, 1976, received fewer detailed perusals by study personnel than those river/creek valleys which had no plan policies. The "Nose Creek Valley Open Space Plan" was approved, with amendments, by City Council on July 23, 1979 (refer to the 'Supporting Information'). Further information is available from the Parks/Recreation Department.

Since a major part of the study involved land use in the river and creek valleys, the City Planning Department took the lead role in preparing the Plan in close consultation with other Civic Departments involved. The Alberta Department of the Environment provided information regarding the water quality, quantity and flow fluctuations of the watercourses for integration with land use planning.

The Calgary River Valleys Plan has been prepared in the following parts:

- 'Land Use Inventory and Analysis'
- 'Development of Policies'
- 'The Plan and Policies'
- 'Appendices'

Detailed inventory and analysis of land uses adjacent to Calgary's watercourses, and environmental conditions of the rivers/creeks and immediately adjacent lands are contained in the 'Land Use Inventory and Analysis' part of the Plan. The 'Development of Policies' identifies problems and opportunities in the river/creek valleys and contains background discussion related to the development of appropriate land use planning policies.

'The Plan and Policies' is a summary of the Calgary River Valleys Plan and is the only part to be presented to the Calgary Planning Commission and City Council for approval. 'The Plan and Policies' has been prepared in two parts. This part includes an Executive Summary, Recommendations, Implementation Procedures, Priorities, and Cost Estimates and Land Use Concept Plans. The second part (blue) contains a summary of supporting information which has formed the basis for the Plan proposals.

All parts of the Plan are available in the Planning Department Library for reference purposes, at the W.R. Castell Central Library, the libraries of the University of Calgary, S.A.I.T., Mount Royal College and the Glenbow Museum, and at Fort Calgary.

THE BOW AND ELBOW RIVER CONFLUENCE IN THE URI

N SETTING

B OVERALL PLAN OBJECTIVES

A1 GOAL:

THE CALGARY RIVER VALLEYS PLAN WILL DEVELOP OPPORTUNITIES FOR LIVING, WORK AND RECREATION BASED ON THE DEVELOPMENT, USE AND CONSERVATION OF THE CALGARY RIVERS, THEIR TRIBUTARIES AND IMMEDIATELY ADJACENT LANDS WITHIN THE CITY LIMITS, FOR THE ENJOYMENT AND BENEFIT OF THE PEOPLE NOW AND IN THE FUTURE.

A2 GUIDING PRINCIPLE:

TO MINIMIZE ECONOMIC OR SOCIAL HARDSHIP UPON ANY INDIVIDUAL OR COMMUNITY IN REALIZING THE PLAN OBJECTIVES.

A3 OBJECTIVES:

- TO ENCOURAGE HARMONIOUS AND DIVERSE USES ADJACENT TO THE RIVERS AND THEIR TRIBUTARIES.
- TO DEVELOP THE RIVERS/CREEKS AND VALLEYS AS A FOCAL POINT OF YEAR ROUND RECREATIONAL ACTIVITIES AND TO PROMOTE AWARENESS OF THE RIVER SYSTEM AS RELATED TO THE OVERALL DEVELOPMENT OF THE CITY.
- TO MAINTAIN AND ENHANCE THE DISTINCTIVE CHARACTERISTICS OF THE RIVERINE ENVIRONMENT.
- TO MINIMIZE LOSS OF LIFE, THREAT TO HEALTH AND TO REDUCE ECONOMIC LOSS BY FLOODING.

It should be noted that all the Plan objectives are of equal importance.

C RECOMMENDATIONS

The Plan recommendations are based on discussion included in the 'Supporting Information'. The nature and scope of the recommendations are the result of joint involvement of the Alberta Department of the Environment, the Calgary River Management Advisory Committee and the Calgary River Management Citizens' Group with the City Planning Department. These policies will ensure a coordinated approach to the development, use, and conservation of the city's watercourses and the immediately adjacent lands.

C1 LAND USE PLANNING

C1.1 OPEN SPACE IN THE RIVER/CREEK VALLEYS

There is an enormous potential in the river/creek valleys for the creation of a comprehensive open space system and the development of adjacent diverse and harmonious land uses. The comprehensive open space system will include regional parks, walkways/pathways, and natural areas adjacent to the watercourses. This will provide opportunities for enjoyment of exciting and diverse year round recreational experiences in the river/creek valleys now and in the future.

C1.1.1 GENERAL:

i) That a comprehensive river/creek valleys open space system be established in accordance with Section 3.6.24 of the Calgary General Municipal Plan (1979) which shall be amended in accordance with the approval of this plan.

ii) That development along Calgary's watercourses ensure diverse and harmonious land uses, such as regional parks, natural areas, and adjacent residential and compatible commercial/industrial uses, to provide opportunities for living, work, and recreation in the overall riverine environment.

iii) That in determining specific recreational uses of public parks adjacent to the watercourses, a full consideration be given to the safety of the users of such areas, and to potential impact on adjacent residents and properties.

iv) Private recreational areas, such as golf courses, may be developed adjacent to the city's watercourses provided continuous public access along the watercourses is created (e.g. easements).

v) That when Major Natural Areas or other river/creek valley regional parks are affected by public utilities, roadways or any other development, an environmental impact assessment report be prepared by the proponent (public and/or private agency) in accordance with the terms the City may establish.

C1.1.2 REGIONAL OPEN SPACE:

C1.1.2.1 THE BOW RIVER

i) That the regional open space system shown on the land use concept plans be adopted (Plates 1-4).

C1.1.2.1.1 SPECIFIC AREA COMPONENTS

SUNNYSIDE HILL AND THE OGDEN MILLICAN ESCARPMENTS

i) That the existing vegetation of environmental value along these escarpments be preserved to maintain the aesthetic significance of these prominent features.

THE SIDE HILL ESCARPMENT AND RIVERSIDE AREA (SOUTH OF COMINCO): CITY-OWNED

i) That the area be retained for a regional park.

ii) That the portion of the site located in the floodway which contains significant natural habitats be preserved.

iii) That, in the event of relocation of the Conmac development, this property be acquired by the City of Calgary for expanding the regional park southwards.

iv) That suitable provision be made for pedestrian/cyclist access between the regional park and the adjacent community of Maple Ridge and, to the east, across the Bow River to Carburn Park and the Riverbend area.

THE C.I.L. LAND IMMEDIATELY ADJACENT TO THE BOW RIVER, SOUTH OF DEERFOOT TRAIL (LAND SUBSTANTIALLY IN THE FLOODWAY)

i) That the site be utilized for a regional park.

ii) That provision be made for pedestrian/cyclist access across the Bow River to link Queensland Downs residential area and the regional park.

THE INSIDE OF A RIVERINE MEANDER AND AN AREA OF RIVERINE FLATLANDS (ADJACENT TO McKENZIE AREA): PROVINCIALLY-OWNED

i) That the Alberta Department of the Environment in planning their golf course pay particular attention to:

(a) preservation of the existing vegetation particularly in the floodway area; and

(b) provision for pedestrian/cyclist access to and along the adjacent riverbank and across the Bow River to Fish Creek Provincial Park.

C1.1.2.2 THE ELBOW RIVER

i) That the regional open space system shown on the land use concept plan be adopted (Plate 5).

ii) Applicable recommendations are listed in Section C1.1.4.12.

C1.1.2.3 NOSE AND WEST NOSE CREEKS

i) That a comprehensive regional open space system be created as indicated on the land use concept plans (Plates 6 & 7).

C1.1.2.4 REGIONAL OPEN SPACE: "MASTER PLANNING"

i) That in preparing detailed land use concept plans for regional open space in the river/creek valleys, the Parks/Recreation Department ensure that individual sites are not planned in isolation to the rest of the open space system and that adequate consideration be given to adjacent local community needs and the nature conservation significance.

C1.1.2.5 SPECIFIC RECREATION FACILITIES

i) That Fort Calgary promote public awareness and interest in Calgary's riverside heritage.

ii) That river/creek valley park facilities such as interpretive centres/points and public viewpoints be compatible with adjacent land uses and maximize scenic opportunities available.

iii) That group camping be not permitted in areas of nature conservation significance.

C1.1.2.6 ACQUISITION AND COST OF LAND

i) That City Council authorize the Administration to negotiate, based on the suggested priorities, with the land owners for the acquisition of lands required for parks in the river/creek valleys (refer to Table 3).

ii) That the City Parks/Recreation Department include in their budget to City Council sufficient funds every year based on priorities, starting in 1982, for the acquisition of land required for parks in the river/creek valleys (refer to Table 4).

C1.1.3 PUBLIC ACCESS:

i) That, as a long term objective, continuous public access to all river and creek banks be provided.

In the case of lots abutting the watercourses which are currently designated RR-1, R-1, R-2 - Residential Districts, this policy will be applied subject to the following conditions:

(a) that extension of the public access rights-of-way or easements beyond those which exist at the date of approval of this plan will be achieved by negotiation with the owners of land, as opportunities arise; or

(b) as specifically directed by City Council.

ii) That the high priority (refer to Tables 1 and 2) and low priority public walkways/pathways along the Bow and Elbow Rivers and the Nose and West Nose Creeks be endorsed as per the land use concept plans.

iii) That proposals for riverbank walkways/pathways include an environmental inventory and a statement of impact on adjacent land uses.

iv) That safety considerations for the users be addressed in locating walkways/pathways along the rivers/creeks and that adverse environmental and social impact on adjacent land uses be minimized.

v) That the Parks/Recreation Department's annual budget to City Council for the maintenance of riverbank walkways/pathways and related facilities be sufficient for the purpose of providing improved amenities to the general public.

vi) That the adequacy of the existing width of riverbank walkways/pathways be re-evaluated.

vii) That in locating walkways/pathways, consideration be given to accommodate cross-country skiing.

viii) That pedestrian/cyclist crossings be provided across transportation corridors adjacent to the city's watercourses where warranted.

ix) That the feasibility of creating separate lanes for cyclists on streets which are part of the existing riverbank walkway/pathway system be evaluated.

x) That pedestrian/cyclist access be provided under future bridges across the city's watercourses and, where warranted, future bridges make suitable provision for pedestrians and cyclists.

xi) That if public access under bridges is not needed, the future bridge design allow, if economically feasible, for adequate space between the abutments and edges of the rivers/creeks to facilitate natural or cultivated landscaping to maintain the continuity of the river/creek edge environment.

xii) That, if economically feasible, replacement of any existing bridges across the city's watercourses not result in the diversion of these watercourses through culverts which would prevent pedestrian/cyclist access under the bridges or conflict with boating/canoeing activities.

C1.1.4 NATURAL AREAS:

C1.1.4.1 MAJOR NATURAL AREAS ADJACENT TO THE WATERCOURSES

For the purpose of this report, Major Natural Areas are defined as areas of open 'green space' 5 acres (2 ha) or more in size, predominantly covered with indigenous vegetation such as prairie grassland or riverine forest, with indigenous fauna present, and lacking substantial modification by man which includes active arable or other farmland uses.

C1.1.4.2 GENERAL RECOMMENDATIONS

i) That Major Natural Areas shown in Figure 1 be adopted.

ii) That the city's Major Natural Areas be preserved in a manner which will:

(a) safeguard existing species, communities and habitats; and

(b) encourage compatible recreational uses for the enjoyment and benefit of all citizens.

In the event of serious conflict between the two sub-objectives, the first assumes priority and appropriate management action should be taken.

This recommendation shall be mandatory and assumes precedence over the other recommendations pertaining to Major Natural Areas.

C1.1.4.3 MANAGEMENT TECHNIQUES

i) That the decision to apply any specific management technique in a Major Natural Area be made on the basis of a detailed site study.

C1.1.4.4 ON-SITE STUDY

i) That a detailed land use concept plan be prepared for each site identified as a Major Natural Area concurrent to the development of adjacent areas or further facility development in these natural areas.

ii) That detailed land use concept plans affecting Major Natural Areas take into consideration the evaluation and constraining criteria identified (refer to Section B1.1.3.6 of the 'Supporting Information').

C1.1.4.5 PROPOSED STATUS

i) That any Major Natural Area acquired through negotiations be redesignated as PE - Public Park, School and Recreation District under the Land Use By-law.

C1.1.4.6 ADJACENT LAND USES

i) That as and when any development adjacent to Major Natural Areas takes place, these areas be protected to minimize adverse environmental impact.

ii) That areas adjacent to Major Natural Areas be developed for compatible land uses and a suitable buffer be provided between these two land uses.

C1.1.4.7 THE ACQUISITION OF MAJOR NATURAL AREAS

i) That, notwithstanding acquisition recommendations made in Section C1.1.4.11, if any Major Natural Area identified:

(a) is proposed for development;

(b) undergoes deterioration in quality that is not the result of natural processes;

it be acquired, subject to budget approval by City Council, for the purpose of preservation before significant qualitative change occurs.

C1.1.4.8 ENVIRONMENTAL IMPACT ASSESSMENT

i) That an environmental impact assessment report concerning Major Natural Areas include reference to:

(a) the evaluation criteria; e.g. size, diversity, naturalness, recorded history, position in an ecological/geographical unit, and presence of natural physical features (refer to 'Supporting Information' Section B1.1.3.6); and

(b) the best public interests now and in the future.

C1.1.4.9 INTERPRETIVE POTENTIAL

i) That appropriate means be established to facilitate nature interpretation of Major Natural Areas.

C1.1.4.10 SUPERVISORY MANAGEMENT

i) That the City of Calgary Parks/Recreation Department provide for the supervisory management of natural areas.

C1.1.4.11 SITE SPECIFIC RECOMMENDATIONS:

Note: The approximate location of each of the following Major Natural Areas, as identified in brackets below, is shown in Figure 1.

C1.1.4.11.1 THE BOW RIVER

THE RIVERINE ESCARPMENT ON THE RIGHT BANK OF THE BOW RIVER EXTENDING WEST FROM APPROXIMATELY THE 33 AVENUE N.W. ALIGNMENT (B1)

i) That this area be preserved in its present form where possible.

ii) That the proponent (public and/or private agency) prepare an environmental impact assessment report for the North West Bypass (Stoney Trail), and any utilities proposed be installed in accordance with recommendations made in Sections C1.1.1 and C1.1.4.8.

THE AREA OF RIVERINE FLATLANDS ON THE LEFT BANK OF THE BOW RIVER OPPOSITE THE WESTERN EXTREMITY OF BOWNESS PARK (B2)

i) Recommendations i) and ii) above apply.

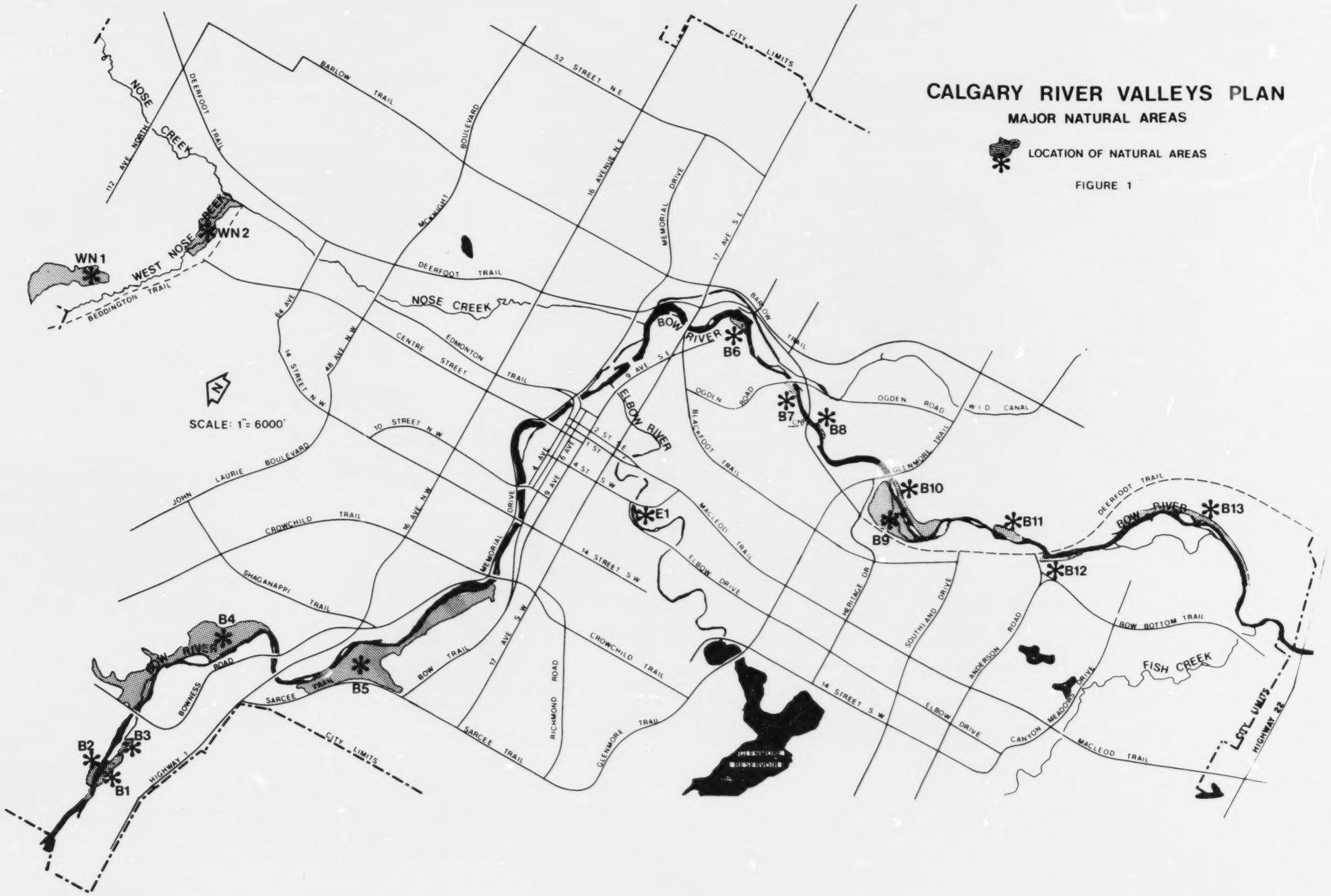
ii) That general public access to this site be not encouraged.

CALGARY RIVER VALLEYS PLAN

MAJOR NATURAL AREAS

LOCATION OF NATURAL AREAS

FIGURE 1



THE AREA COMMENCING AT APPROXIMATELY THE 33 AVENUE N.W. ALIGNMENT - BOUND ON THE WEST, NORTH AND EAST BY THE WEST CHANNEL OF THE BOWNESS LAGOON AND ON THE SOUTH BY THE RIVERINE ESCARPMENT (B3)

i) That this area in the floodway be preserved for a natural environment park.

BOWMONT PARK (B4)

i) That the immediately adjacent Provincially-owned portion of the site to the west be incorporated into Bowmont Park.

THE EDWORTHY COMPLEX: THE ESCARPMENT WEST OF EDWORTHY PARK, EDWORTHY PARK, THE DOUGLAS FIR ESCARPMENT AND LOWERY GARDENS (B5)

i) That potential natural habitats in this area be protected to facilitate regeneration.

ii) That the private escarpment land located immediately west of Edworthy Park be preserved for a natural environment park (C.P.R. Right-of-Way to Sarcee Trail).

iii) That Lowery Gardens and the adjacent portion of Provincially-owned riverine escarpment be incorporated into this natural area.

THE INGLEWOOD BIRD SANCTUARY (B6)

i) That the private land located south of 9 Avenue S.E. and east of Sanctuary Road be integrated into the sanctuary as a buffer.

AN AREA OF RIVERINE FLATLANDS ON THE RIGHT BANK OF THE BOW RIVER IMMEDIATELY SOUTH OF THE BONNYBROOK BRIDGES: CITY-OWNED (B7)

i) Recommendations i) - iii) in Section C1.1.4.12 are applicable.

AN AREA OF RIVERINE FLATLANDS AND ESCARPMENT ON THE LEFT BANK OF THE BOW RIVER ABUTTING THE C.N.R. RAILWAY LINE AND BEAVER DAM FLATS PARK: CITY-OWNED (B8)

i) That this area be preserved and incorporated into the Beaver Dam Flats Park system.

THE COMINCO NATURAL AREA (B9)

i) That the portion of this natural area situated in the floodway and floodplain to the east of the Deerfoot Trail right-of-way south of Heritage Drive be preserved.

ii) That the escarpment to the west of the Cominco Plant be preserved.

CARBURN PARK: CITY-OWNED (B10)

i) That the immediately adjacent Provincially-owned portion of the site to the west be incorporated into Carburn Park.

AN AREA OF RIVERINE FLATLANDS ON THE LEFT BANK OF THE BOW RIVER LOCATED PREDOMINANTLY TO THE NORTH OF THE PRIVATE CONMAC BRIDGE AT APPROXIMATELY THE 108 AVENUE S.W. ALIGNMENT (B11)

i) That this area be preserved subject to Recommendation ii) in Section C1.1.4.2.

THE RIVERINE ESCARPMENT ADJACENT TO QUEENSLAND DOWNS: CITY-OWNED (B12)

i) That environmental damage be prevented and the existing vegetation along the escarpment be preserved.

AN EXTENSIVE AREA OF RIVERINE ESCARPMENT INCLUDING SOME SMALL AREAS OF RIVERINE FLATLANDS LOCATED OPPOSITE THE FISH CREEK PROVINCIAL PARK: CITY-OWNED (B13)

i) That general public access to this area be not encouraged.

C1.1.4.11.2 THE ELBOW RIVER

ELBOW ISLAND PARK: CITY-OWNED (E1)

i) That portions of the park presently in a natural or near natural state be preserved to protect natural habitats.

ii) That, with reference to Recommendation i) above, any increased recreational use be accommodated by further utilizing the manicured portions of the park.

C1.1.4.11.3 WEST NOSE CREEK

THE SOUTH FACING ESCARPMENT SITUATED TO THE WEST OF 4 STREET N.W., NORTH OF THE CREEK (WN1)

i) That this escarpment be preserved and environmental damage prevented.

WEST NOSE CREEK VALLEY EAST OF 4 STREET N.W. (WN2)

i) That natural habitats in the valley be protected to facilitate regeneration.

C1.1.4.12 SMALL FRAGMENTED, DISCONTINUOUS AND LESS SIGNIFICANT NATURAL AREAS

i) That natural areas adjacent to construction sites be adequately protected to minimize adverse environmental impacts (e.g. fencing).

ii) That suitable means be established to promote public awareness of the existence and value of natural areas and major vegetation adjacent to the city's watercourses.

iii) That portions of existing city riverside parks presently in a natural or near natural state be preserved in their present form, where possible (e.g. the portion of Bowness Park east of 85 Street N.W., and the northeasterly portion of William Pearce Estate).

iv) That existing treed areas of Lindsay Park adjacent to the Elbow River be retained for public open space recreational uses.

C1.1.4.12.1 THE ELBOW RIVER

There are numerous natural areas in the vicinity of the Elbow River. For the most part, they are either small, isolated, fragmented or of limited nature conservation significance. These areas include Scotsman's Hill, the riverside area of Lindsay Park, the escarpment adjacent to the communities of Rideau/Roxboro, portions of Stanley Park and much of the riverbank along the entire length of the river. These important local environmental resource features make a major contribution to the aesthetics and natural character of lands in the vicinity of the Elbow

River and they support a variety of species. It is desirable that they be preserved and general recommendations applicable to such sites are contained in the preceding Section.

i) That private riverbank lands southwest of Sandy Beach be acquired by the City of Calgary for park purposes and be integrated with the adjoining city parks, i.e. Sandy Beach and River Park.

C1.1.4.13 ISLANDS

i) That all islands in the Bow and Elbow Rivers not presently developed as parks be preserved as sanctuaries for existing flora and fauna to permit natural processes to operate and no general public access be encouraged.

ii) That all the Provincially-owned islands in the Bow and Elbow Rivers be protected by the Province in consultation with the City Parks/Recreation Department.

iii) That any modification to islands and/or gravel bars be permitted subject to the preparation of an environmental impact assessment report and public review, prior to the implementation of such works.

C1.2 FLOODPLAIN MANAGEMENT

The basic objective of the floodplain management policy is to minimize loss of life and to reduce potential flood damages to properties in the flood prone areas. Therefore, it is important to integrate floodplain management policies into the overall planning and development context of the flood prone areas in the City of Calgary. By introducing floodplain management into the fabric of urban municipal programs and by aligning it with community development goals, both municipal and community goals can be achieved.

The measures to minimize flood losses include land use planning and certain structural controls. The structural controls included in Policy B.1.i) under Section C1.2.1.3 are not applicable to the detached single-family dwellings currently existing in the flood prone areas. This will help to maintain the present overall character of existing riverside residential communities.

Development in the floodway and floodplain areas will be regulated by special overlay conditions. These overlay conditions (rules without new land use districts) will be included in the Land Use By-law and applied in addition to the rules for development specified in relation to land use designations included in the Land Use By-law.

It should be noted that all existing land uses in the floodway areas will become non-conforming upon the inclusion of the allowable uses in the Land Use By-law. Moreover, no development will be allowed within the development setbacks required from the edges of the city's watercourses, unless otherwise stated in the Land Use By-law.

With respect to the amendments to the Land Use By-law, all land owners affected by the floodway and floodplain areas will be notified accordingly. Additionally, a public hearing of City Council will be held prior to actually incorporating the overlay conditions into the Land Use By-law.

C1.2.1 FLOODPLAIN MANAGEMENT POLICY:

C1.2.1.1 DEFINITIONS

Floodway - The present channel plus those portions of land which are needed to convey a flood of designated magnitude* without unreasonably raising the upstream water levels above the natural levels that would exist if the channel were well maintained.

Floodplain - The land located immediately adjacent to the floodway which is not needed for the conveyance of the designated flood but which is, nonetheless, subject to inundation.

---

*Note: Floodway and floodplain limits are based on a designated flood of 80,000 cubic feet per second for the Bow River upstream of its confluence with the Elbow River, 110,000 c.f.s. downstream of the confluence; 20,300 c.f.s. for the Elbow River downstream from Glenmore Dam; and 3,231 c.f.s. and 1,339 c.f.s. for the floodplain limits of the Nose and West Nose Creeks respectively (Ref. "City of Calgary Flood Study, Volume One, Bow River Report," May 1973, Montreal Engineering Co. Ltd.; "Elbow River Flood Study," December 1979, Monenco Consultants Ltd.; "Nose Creek Floodplain Study," September 1980, Hydrocon Engineering (Continental) Ltd., respectively).

1.2.1.2 GENERAL RECOMMENDATIONS

(a) That development in the floodway and floodplain areas be regulated by special overlay conditions (rules) to be contained in the Land Use By-law. Limits of the areas subject to these overlay conditions are as shown on the land use concept plans.

(b) That the floodway and floodplain boundaries for the Bow River (1 in 70 year flood), the Elbow River (1 in 100 year flood); and the floodplain boundaries for Nose and West Nose Creeks (1 in 100 year flood) as provided by the Alberta Department of the Environment, be mapped on the 1":400' scale Land Use maps.

(c) That the City of Calgary continue to apply its current policy of acquiring, on an opportunity basis, properties located in the floodway.

(d) That the Province (the Alberta Department of the Environment) evaluate the potential for a Government Flood Insurance Scheme.

1.2.1.2.1 FLOODWAY

(a) That no debris, gravel, dirt, minerals, or other types of waste material such as garbage, trash, and chemicals, explosives, buoyant materials, flammable liquids or other toxic materials be permitted in the floodway.

(b) That no buildings or other structures be permitted in the floodway, unless deemed by the approving authority to be non-obstructing or unless otherwise stated in the Land Use By-law.

(c) That the preparation of any site for permitted uses in the floodway shall not materially change the nature and function of the hydrological system or the quality of water resources in the area.

1.2.1.2.2 FLOODPLAIN

(a) That development of institutional uses with residential components, such as hospitals, senior citizens' homes, homes for the mentally or physically ill, not be permitted in the floodplain because of potential problems in the event of evacuation.

(b) That mobile home parks or such with structures which may be readily carried away by floodwaters and cause damage to other properties not be permitted in the floodplain.

(c) That open storage of equipment, materials and hazardous goods which cannot be removed readily or would float away in the event of a major flood, not be permitted in the floodplain.

C1.2.1.3 LAND USE AND DEVELOPMENT CONTROLS

A. FLOODWAY

i) Land uses to be allowed in the floodway are:

(a) public parks, playgrounds, golf courses, picnic grounds;

(b) flora and fauna preservation areas;

(c) boat/canoe launching sites;

(d) horticultural nurseries;

(e) botanical gardens;

(f) public utilities adjacent to and across the city's watercourses;

(g) parking areas which are related to public recreational facilities, provided that suitable landscaping is included in the development of such parking areas;

(h) trails (pedestrian, cycling, equestrian and cross-country skiing); and

(i) farm of not less than 40 acres (26 ha).

B. FLOODPLAIN (AREA ABUTTING THE FLOODWAY)

1. Floodplain Land in Newly Developing Areas (Previously Undeveloped)

i) All development shall be subject to the following conditions:

(a) the first floor elevation of the building(s) shall be constructed at, or above, the designated flood level;

(b) all principal electrical, heating or mechanical equipment shall be at, or above, the designated flood level;

(c) the building(s) shall be endorsed by a professional civil engineer as structurally sound to withstand damage from floodwaters;

(d) if the ground level of the site is to be raised with stable fill or by any other acceptable means certified by a professional civil engineer, then the stable fill, if utilized, must extend to at least 15 feet/4.5 m beyond the limit of any building erected thereon; and

(e) all access roads shall be constructed at, or above, the designated flood level.

ii) Create development setbacks as follows:

(a) 200 ft./60 m from the edge of the Bow River;

(b) 100 ft./30 m from the edge of the Elbow River, and the Nose and West Nose Creeks;

(c) or floodway plus 20 ft./6 m, whichever is greater.

iii) The stability of the creek/riverbank shall be assessed and confirmed as unaffected by proposed development.

2. Floodplain Land in Existing Developed Areas (Infill Development/Redevelopment)

i) All new development or redevelopment shall be in accordance with Policies B.1. i) to iii) above excepting the following cases where only Policies B.1. ii) and iii) shall apply:

(a) the construction of a detached single-family dwelling and related accessory buildings; and

(b) additions to, or partial redevelopment of buildings existing in the floodplain.

ii) In the case of B.2.i)(a) and (b), if the development setbacks stated under Policy B.1.ii) do not facilitate redevelopment on the properties abutting the watercourses, the development setbacks be reduced to one-third of the property depth or the floodway plus 20 ft./6 m, whichever is greater, with the following exception.

iii) Southern Edge of the Lagoon Adjacent to Prince's Island:

Development setback be the floodway plus 20 ft./6 m for the principal building(s), and no development setback may be required, if all development in the floodway provides for public open space use, and it does not create a continuous vertical hard edge coincident with the existing edge of the lagoon.

C1.2.2 ADVISORY GUIDELINES FOR NEW DEVELOPMENT OR REDEVELOPMENT IN THE FLOODPLAIN WHERE COMPLIANCE WITH POLICY B.1. UNDER SECTION C.1.2.1.3 IS NOT REQUIRED:

The following ADVISORY guidelines should be provided to all land owners/developers proposing construction in the floodplain areas in the City of Calgary. These advisory guidelines will not be included in the Land Use By-law.

C1.2.2.1 GENERAL

(a) Where it is desirable to have a detached single-family dwelling with a basement below the designated flood level, this floor should not contain bedrooms.

(b) Basements should not be utilized for storage of immovable or hazardous materials that are flammable, explosive or toxic.

(c) Footings and foundation walls should be cast-in-place concrete.

(d) The top of the basement walls should be a minimum of 12 inches/300 mm above the designated flood level.

(e) Basement walls should be provided with at least two openable windows located on opposite sides of the building. The window sill should be at least 12 inches/300 mm above the designated flood level.

(f) Where practical, stable fill may be used to raise the lowest portion of the building above the designated flood level, provided the building is not raised to a height which is not in keeping with surrounding buildings or conflict with the Land Use By-law.

(g) Where possible, buildings should be constructed with the longitudinal axis parallel to the direction of flood flow.

C1.2.2.2 ANCHORAGE

In order to resist floatation and lateral movement, the basement floor joists should either have the ends embedded in the basement concrete wall or the header joist mechanically fastened to the required anchor bolts for the sill plate, or any other system providing similar protection.

C1.2.2.3 BASEMENT DRAINAGE SYSTEM

(a) A sump pump should be provided in the basement.

(b) The outflow pipe should be looped and discharge above the designated flood level.

(c) A separate electrical circuit should be provided for the sump pump with the operating switch located above the designated flood level.

(d) Basement walls should be made water tight through the use of paints, membranes and mortars to minimize seepage.

(e) Installation of cutoff valves on sewer lines or the elimination of gravity flow basement drains.

C1.2.3 POLICY GUIDELINES FOR THE REMOVAL OF INCOMPATIBLE RIVERSIDE LAND USES EXISTING IN AND ADJACENT TO THE FLOODWAY:

Incompatible riverside land uses in an urban setting are: gravel mining operations, feed lots, oil refineries, gravel processing, manufacturing of concrete products, dumping, storage and use of hazardous materials, manufacturing of toxic goods, gas service stations, commercial parking lots, auto-body repair shops, car sales and service lots, railway yards and other similar industrial/commercial uses.

(a) That the City of Calgary continue to apply its current policy dated June 24, 1974 of acquiring, on an opportunity basis, land containing incompatible riverbank land uses.

(b) That the current land acquisition program be extended to implement the Calgary River Valleys Plan.

C1.3 TRANSPORTATION CORRIDORS ADJACENT TO THE WATERCOURSES

i) That major transportation corridors, with two lanes or more in each direction, be routed away from the river/creek valleys, where possible.

ii) That the upgrading of existing roadways or the location of new roadways adjacent to Calgary's watercourses be planned with respect to:

(a) the development setbacks required as per the Floodplain Management Policy;

(b) potential for creating riverside recreational nodes; and

(c) potential environmental impact on the existing riverside vegetation.

iii) That adequate rights-of-way be retained for transportation corridors to avoid encroachment onto creek/riverbank parkland when these roadways are upgraded.

C2 WATER RELATED CONSIDERATIONS

C2.1 WATER-BASED RECREATION

i) That environmental damage be minimized in the development of any facilities designed to enhance water-based recreational opportunities adjacent to areas of nature conservation significance.

ii) That suitable measures be introduced to improve water safety as it relates to the city's watercourses.

iii) That the development of canoe launching sites and any related facilities for water-based recreational activities be encouraged on and adjacent to the Bow and Elbow Rivers.

iv) That the feasibility of establishing a whitewater canoe course at a suitable location on the Bow River and a canoe chute to bypass the weir be evaluated.

v) That appropriate measures be taken to ensure the future viability of the fisheries resource of Calgary's rivers in relation to water quality, water flows and other aspects of water management.

C2.2 WATER QUALITY

i) That water quality of the city's watercourses be monitored on a regular basis.

ii) That advanced wastewater technology be applied, on an ongoing basis, with the aim of improving water quality.

iii) That the City's sewage treatment plants continue to be upgraded in relation to the city's growth, with the aim of safeguarding sensitive uses and users (i.e. water supply, recreationists, fish, aquatic life and wildlife) from non-sensitive uses (i.e. effluent discharges).

C2.3 WATER FLOW LEVELS

i) That, based on the present priorities and constraints,i.e. water supply, flood protection, and recreational uses on the Glenmore Reservoir and the Elbow River downstream, the current operations of the Waterworks Division, City of Calgary Engineering Department be maintained, and water flow levels improved if economically feasible.

C3 PRESERVATION AND ENHANCEMENT OF THE RIVERINE ENVIRONMENT

The following recommendations relate to the preservation of distinctive natural features and historical resources adjacent to the watercourses and to the enhancement of aesthetically unpleasant areas in the river/creek valleys. This will ensure that the aesthetic value of Calgary's river/creek valleys is preserved for the enjoyment and benefit of the people now and in the future.

C3.1 AESTHETICS

i) That, where possible, the aesthetic value of the river/creek valleys be maintained and enhanced by:

(a) a program for the beautification of both banks of the Bow River between Louise Bridge (10 Street) and the Zoo islands;

(b) adherence to the development setbacks from the edges of the watercourses (Section C1.2.1.3);

(c) preservation of environmentally sensitive areas;

(d) programs facilitating regular clean-ups of the banks of the watercourses;

(e) provision of suitable landscape buffers between the watercourses and adjacent land uses where needed; and

(f) avoidance of future riverside land uses that would have an adverse environmental impact on the landscape.

ii) That future bridge design be aesthetically pleasant based on the function and location of the bridge in relation to the adjacent land uses.

C3.2 NATURAL FEATURES

i) That undeveloped escarpments existing in the river/creek valleys be preserved in their natural state, and in the case of areas affected by public utilities the environmental damage be minimized (refer to Appendix VII).

ii) That the environmentally sensitive oxbow lakes (not isolated by subsequent development) and the glacial erratics existing in the Nose and West Nose Creek valleys be preserved and adequately protected.

C3.3 ARCHAEOLOGICAL SITES

i) That land owners/developers proposing subdivision and/or development in areas adjacent to the watercourses involving archaeological sites, established by the Alberta Department of Culture, comply with the Alberta Historical Resources Act.

C3.4 SNOW DISPOSAL

i) That "Land Storage Sites*" be established and be suitably landscaped to enhance the aesthetics of these sites.

ii) That where snow is disposed of on the bank slopes of the rivers/creeks, damage to the slopes be minimized until such time when "Land Storage Sites" are established.

C3.5 DISTURBED AREAS

i) That where disturbed areas exist in public parks adjacent to the watercourses, appropriate measures be taken to rehabilitate such areas.

C3.6 RIVERBANK EROSION

i) That measures taken to prevent erosion of the riverbanks be aesthetically pleasant in terms of the techniques and materials utilized.

ii) That private owners of structures on riverbank land be advised of riverbank erosion problems and their potential hazard, and that they be required to take suitable corrective measures.

---

*Land Storage Sites - Sites located away from creek/riverbanks.

C4 PUBLIC AWARENESS

C4.1 HAZARDS AND GENERAL INFORMATION RELATED TO THE WATERCOURSES AND ADJACENT CITY PARKS

i) That the general public be periodically advised of possible hazards related to the city's watercourses.

ii) That the parks and recreation network adjacent to Calgary's watercourses be adequately advertised and promoted.

C4.2 SOCIALLY UNACCEPTABLE BEHAVIOUR

i) That overall planning of the river/creek valley parks and facilities address the following aspects:

(a) the safety of users of the parks and adjacent residents; and

(b) the protection of adjacent properties and environmentally sensitive areas.

ii) That comprehensive patrolling be established to facilitate:

(a) protection for recreationists against anti-social behaviour; and

(b) effective supervision of the river/creek valley parks and facilities.

D IMPLEMENTATION: PROCEDURES, PRIORITIES, AND COST ESTIMATES

D1 As a follow up to the approval of the Calgary River Valleys Plan, the affected Civic Departments should take the necessary steps to implement the recommendations of this plan. Many of the recommendations can be implemented by requiring adherence to existing and proposed policies.

In the case of specific recommendations which call for any corrective measures, initiative should be taken by Civic Departments responsible for implementing such policies. In this case, appropriate reports should be prepared as Commissioners' Report for submission to respective Standing Policy Committees of City Council for their recommendations to City Council.

Respecting the overall implementation of the Calgary River Valleys Plan, it is essential that the general public is well advised of future projects and that public views are secured prior to finalizing proposals for presentation to City Council.

It is anticipated that the implementation of the Calgary River Valleys Plan will take about 20 years. However, the ultimate success in implementing this plan will depend upon financial commitments by the Provincial Government and the City of Calgary, as well as the support of the general public.

The following responsibilities and procedures are recommended in relation to the overall plan policies.

D2 GENERAL:

Although these responsibilities are listed under separate headings, it is stressed that these procedures be pursued in context with the overall policies embodied in the Calgary River Valleys Plan, and in close consultation with various Civic Departments involved.

1. Policy Reports and Plans affecting the river/creek valleys should comply with the policies and address issues contained in the Calgary River Valleys Plan.

2. It is essential that the Planning and Parks/ Recreation Departments review and monitor the implementation of the Calgary River Valleys Plan, in consultation with other Civic Departments affected, as a part of the Calgary General Municipal Plan.

3. It is recommended that City Council authorize the Civic Administration to request the Provincial Government for financial assistance to facilitate the implementation of the following:

   a) land acquisition for the regional parks and/or natural areas in the river/creek valleys;

   b) acquisition of land/property in the floodway;

   c) measures to prevent creek/riverbank erosion; and

   d) removal of incompatible riverside land uses.

4. Any donations offered by private individuals and/or agencies facilitating land acquisition for public parks and/or the development of such parks and other recreational amenities, be considered by the City of Calgary.

5. Alternative location studies and/or impact statements may be required by Civic Departments proposing public works which could disrupt the natural environment pursuant to the "Policy on Disturbance of Natural Environment by Public Works" (Appendix VII), approved by City Council on October 22, 1973.

6. The privately owned areas currently used for gravel extraction be reclaimed by the land owners to the satisfaction of the City Engineer, when these operations cease.

7. Where applicable, land owners may request the Provincial Government (Alberta Department of the Environment) for a grant for the reclamation of gravel extraction areas.

8. The City of Calgary send a letter requesting the Province (Alberta Department of the Environment) to evaluate the potential for a Government Flood Insurance Scheme.

D3 CITY PLANNING DEPARTMENT:

1. Policies PR.13 i), PR.14 and PR.15 of the Calgary General Municipal Plan (1979) be appropriately amended.

2. An abbreviated version of the Calgary River Valleys Plan be incorporated into the Calgary General Municipal Plan.

3. In order to effectively control development in the floodway and floodplain areas in the City of Calgary, the overlay conditions (rules) stated in the floodplain management policy be included in the Land Use By-law.

4. The City-owned land for regional parks and/or natural areas should be designated as PE-Public Park, School and Recreation District to facilitate the development of these areas as recreational nodes in the river/creek valleys.

5. The acquisition of private lands for regional parks and/or natural areas, located outside the floodway, will require negotiations with land owners, as and when subdivisions take place.

6. In the case of subdivision of land adjacent to the city's watercourses, surplus municipal reserve land, if any, should be located on private lands outside the floodway where regional recreational open space is needed.

7. Surplus municipal reserve land, if any, resulting from subdivision of land away from the city's watercourses, should be deferred against subsequent subdivision of creek/riverbank land owned by the same land owner to create public access where required. (reference Sec. 99(1.1)(b) of The Planning Act, 1977).

8. Ensure that appropriate recommendations are included in Area Structure Plans and Area Redevelopment Plans to provide public access to and along the creek/riverbanks, where feasible and required by this plan, and that suitable implementation procedures are outlined.

9. In the case of redesignation of land abutting the city's watercourses, public access to the rivers/creeks should be negotiated.

10. In accordance with the Calgary General Municipal Plan (1979) (Policy PR.18), require adherence to the 60 ft./18 m setback from the top of any escarpment and the development setbacks stated in the Calgary River Valleys Plan (reference Floodplain Management Policy).

11. That in the case of riverside land uses such as gravel processing plants, concrete block manufacturing, industrial development with outside storage, car sales and service lots, and railway yards which exist adjacent to Nose Creek (McKnight Boulevard) and the Bow and Elbow Rivers (Stampede Grounds), the land owners be requested by the City of Calgary to provide a suitable landscape buffer to screen these developments from the watercourses.

D4 CITY TRANSPORTATION DEPARTMENT:

1. With respect to the location or upgrading of transportation corridors adjacent to the city's watercourses, ensure the following:

   a) public input prior to making final recommendations to City Council;

   b) suitable landscaping along both sides of these transportation corridors; and

   c) appropriate pedestrian/cyclist crossings across these transportation corridors to facilitate safe and convenient public access to the riverbank park areas.

2. In order to avoid potential conflict between pedestrians, joggers and cyclists, evaluate the feasibility of creating separate lanes for cyclists on streets which are part of the existing riverbank walkway/pathway systems.

D5 CITY PARKS/RECREATION DEPARTMENT:

1. Prepare "Master Plans" (detailed land use concept plans) for the regional parks and natural areas in the river/creek valleys, and ensure the following:

a) public input prior to the actual development of the regional parks and/or natural areas;

b) liaison with the City Police Department and other Civic Departments affected;

c) assessment of social and environmental impact on surrounding land uses of future specific recreational facilities within the regional parks and/or natural areas; and

d) employment of 'Area Naturalists' whose role should include increasing public awareness of the value of natural areas and other park resources, particularly in relation to private land owners with properties adjacent to the watercourses.

2. In order to enhance the attractiveness of the Bow River adjacent to the downtown, it is recommended that a suitable form of lighting be provided on both banks of the river. This will also provide safety for the users of the riverbank walkways/pathways during the evening hours.

3. Engage security personnel to regularly monitor and patrol public river/creek valley parks and recreational facilities.

4. The riverside recreational nodes and walkways/pathways should be maintained regularly.

5. The current standard width 8 ft./2.4 m of the riverbank walkways/pathways be re-evaluated in relation to the following:

a) types of users, e.g. pedestrians, joggers, cyclists, and cross-country skiers;

b) possible separate lanes for pedestrians and cyclists;

c) safe location in relation to adjacent steep riverbanks;

d) safe location in relation to major transportation corridors adjacent to the watercourses;

e) possible future use by the City Police Department's mounted police patrol;

f) type of paving material to be used.

6. Concerning the enhancement of the overall riverine environment in the City of Calgary, the Clean Calgary Committee should receive strong support in their efforts to monitor and analyze pollution problems and to liaise with the Province and the City of Calgary, particularly with respect to their yearly city-wide clean-up campaign which includes the Bow and Elbow Rivers. Similar programs should be established for the Nose and West Nose Creeks.

7. In consultation with the Alberta Department of the Environment and Calgary canoe clubs, investigate the feasibility of establishing a suitable location for a whitewater canoe course on the Bow River, and a canoe chute to bypass the W.I.D. weir.

8. The disturbed sites in public parks and on escarpment slopes adjacent to the city's watercourses should be rehabilitated through the restoration of natural appearing contours and replanting of trees and shrubs, on a high priority basis.

9. Trails should be provided in appropriate locations on the escarpment adjacent to Queensland Downs to prevent further trampling of natural vegetation in the remaining parts of the slopes.

10. In order to facilitate the interpretation of natural areas, provide facilities such as the following:

a) self-guiding nature trails;

b) interpretive centres/points; and

c) programs of outdoor nature education.

11. Existing natural features, such as the 'Split Rock' adjacent to West Nose Creek and the glacial erratic and oxbow lakes in the Nose Creek valley, should be fenced and signs aesthetically compatible with the environment be erected warning against any damage to these features, when these areas are dedicated as Environmental Reserve resulting from subdivision.

12. The escarpment north of West Nose Creek should be protected by fencing when the adjacent land is under development.

13. Appropriate signs should be erected concerning archaeological sites of significance adjacent to the city's watercourses.

14. Conduct an active public relations campaign relating to all aspects of criminal activity and behavioural problems in the creek/river valley parks, and suitably promote the parks and recreation network adjacent to the city's watercourses.

15. The Parks/Recreation Department's Vandalism Prevention Committee should maintain liaison with the City Police Department and the city-wide Vandalism Prevention Task Force established in 1981.

16. Allocate sufficient funds, as a part of the Department's annual budget to City Council, for the general maintenance and improvement of the river/creek valley parks and facilities.

17. Allocate in the annual budget to City Council approximately $3,500,000.00 (1981 dollars) every year for the acquisition of land required for parks in the river/creek valleys. Appropriate inflation factor must be added to the above budget allocations.

D6 CITY ENGINEERING DEPARTMENT:

1. It is of vital importance that the City Engineering Department liaise, on a regular basis, with the Province (Alberta Department of the Environment) concerning matters related to the management and development of the city's watercourses, particularly with respect to improving the water quality and enhancing the riverine environment in the City of Calgary.

2. The water quality in the city's watercourses should be monitored regularly in consultation with the Alberta Department of the Environment.

3. The Sewer Division of the Engineering Department in consultation with the Alberta Department of the Environment should determine appropriate remedial measures to prevent riverbank erosion. (Location reference: Klohn Leonoff Consultants report: "Calgary Rivers - Structures and Erosion Condition" dated June 1979, Appendix I).

4. The Streets Division of the Engineering Department should continue to establish "Land Storage Sites" for snow disposal.

5. The disturbed sites in the proximity of the Elk's Club Golf Course dam and the existing storm sewer outfalls should be rehabilitated, on a high priority basis.

6. The proposed pedestrian bridges across the Bow and Elbow Rivers be provided by the City Engineering Department in consultation with the Parks/Recreation Department. It is emphasized that the pedestrian bridge to link Queensland Downs residential area with the proposed regional park on C.I.L. land should be constructed, in the near future, to avoid the tendency for pedestrians/cyclists to use the Deerfoot Trail (Expressway) bridge.

7. The City Engineering Department discuss with Canadian Pacific Railways appropriate measures to minimize and, if possible, eliminate potential risk involved in crossing the railway tracks by recreationists in Bowmont Park and Edworthy Park.

D7 CITY LAND DEPARTMENT:

1. The Land Department, in consultation with the Parks/Recreation Department, should prepare a suitable program for the acquisition of land required for the proposed regional parks and/or natural areas in the river/creek valleys, based on the recommended priorities shown in Table 3.

2. The City of Calgary should continue to apply its current policy (June 24, 1974) concerning the "removal of incompatible riverbank land uses, and the purchase, on an opportunity basis, of properties in the floodway where development constitutes a hazard to downstream structures and other features in the event of a major flood."

3. In newly developing areas (previously undeveloped) abutting the city's watercourses, negotiate for the acquisition of land for the required development setbacks from edges of the watercourses.

4. In older areas (existing developed areas) abutting the city's watercourses acquire through negotiations on an opportunity basis:

   a) riverbank land/property to provide future public access to the watercourses and for other suitable regional open space recreational uses, particularly in the floodway; and

   b) easements, where feasible, to provide future public access within the required development setbacks from the edges of the watercourses.

5. Where land is to be acquired by the City of Calgary on an opportunity basis, the Land Department should inform the Land Committee of City Council of the progress of negotiations with the land owner(s) involved so that City Council may provide additional directions to facilitate the acquisition of such lands.

D8 CITY FIRE DEPARTMENT:

1. The Fire Department, in consultation with the Parks/Recreation Department and the Red Cross Society, should investigate suitable measures to address water safety concerns related to the recreational uses of the city's watercourses and facilities on adjacent lands for water-based recreational pursuits.

2. The general public should periodically be advised of possible hazards related to the city's watercourses (e.g. through the local news media).

D9 CITY POLICE DEPARTMENT:

1. In order to prevent all-terrain vehicle use in public parks, the provisions in the Parks By-law No. 36/76 (Appendix X) relating to the use of vehicles in public parks (Section 18-Nos. 1, 2, 3 and 4) should be stringently enforced through increased supervision in consultation with the Parks/Recreation Department.

2. In the case of existing riverbank walkways/pathways including riverside public parks and facilities, increased police or security presence should be arranged on a regular basis to provide safety for the users and adjacent residents and to protect adjoining properties against anti-social behaviour.

3. The City Police Department's mounted police patrol (presently 5 horses) should be expanded to provide comprehensive patrolling of riverside parks, trails and other recreational areas.

4. The City of Calgary should request the Provincial Government to continue to contribute to the operating costs of the City's mounted police patrol.

D10 In addition, the City of Calgary requests the ALBERTA DEPARTMENT OF THE ENVIRONMENT to undertake the following actions:

1. The Alberta Department of the Environment should encourage and facilitate, on a regular basis, liaison with the City of Calgary concerning matters related to the management and development of the city's watercourses, specifically with respect to enhancing the water quality.

2. The Alberta Department of the Environment should request the Fish and Wildlife Division of the Alberta Department of Energy and Natural Resources to maintain inventory of fisheries resources of Calgary's rivers and to determine what prerequisites are necessary to ensure the future viability of this resource.

3. In order to protect the floodway, the Province (Alberta Department of the Environment) should share in the costs of the acquisition of floodway land by the City of Calgary.

4. The Alberta Department of the Environment should consider transfering Lowery Gardens and the Provincially-owned parcels adjoining Carburn Park and Bowmont Park to the City of Calgary Parks/Recreation Department for use as part of the above city parks.

5. The Alberta Department of the Environment should request the Alberta Recreation and Parks Department to provide a pedestrian bridge across the Bow River to link Fish Creek Provincial Park and the Provincial golf course proposed on the east side of the Bow River.

TABLE 1 BOW RIVER - RIVERBANK WALKWAYS/PATHWAYS (HIGH PRIORITY)

Location	Distance Through Private Land (approx.)	Distance Through City Land (approx.)
A point 1700 ft. east of 85 Street N.W. to 85 Street N.W., north of the Bow River (Plate 1)	1,700 ft./518 m	-
Carburn Park to Queensland Downs (west of the Bow River), where the north end of an existing walkway/ pathway to Fish Creek Provincial Park is located (Plate 4)	4,000 ft./1219 m (Conmac)	6,000 ft./1829 m
TOTAL	5,700 ft. (1.08 miles/ 1.73 km)	6,000 ft.(1.13 miles/ 1.83 km)

TABLE 2 ELBOW RIVER - RIVERBANK WALKWAYS/PATHWAYS (HIGH PRIORITY)

Location	Distance Through Private Land (approx.)	Distance Through City Land (approx.)
Glenmore Athletic Park, towards Glenmore Park, to a point where a sidewalk on the nearby road exists (Plate 5)	-	550 ft./168 m
Total	-	550 ft. (0.14 miles/ 0.22 km)

NOTE:

1. 'Plate' refers to the land use concept plan.
2. Low Priorities in the case of the Bow and Elbow Rivers are as shown on the land use concept plans.
3. With respect to Nose and West Nose Creeks, the walkways/pathways are given low priority (refer to Plates 6 and 7).
4. For futher information reference should be made to the 'Supporting Information'.

TABLE 3 LAND ACQUISITION PRIORITIES

		PRIORITY
	BOW RIVER	
(B1)	Private lands in Bowmont Park: Carma, Fournier, and Klippert lands	- High Priority (Present policy of City Council, October 22-23, 1979, and as per the Proposed Bowmont Park Master Plan, July 20, 1981)
(B2)	Private Urban-Reserve parcels in Shouldice Athletic Park	- Low Priority (Present policy of City Council - Bowmont Design Brief April 25, 1978)
(B3)	Cominco Natural Area Total 146 acres (59 ha)	- High Priority (Floodway land is approximately 79 acres (32 ha) and land in the flood plain is about 67 acres [27.13 ha])
(B4)	Conmac (part of the proposed riverside regional park)	- Low Priority (Floodway land expected to be dedicated as Environmental Reserve when subdivided)
(B5)	C.I.L. land immediately adjacent to and east of the Bow River south of the Deerfoot Trail corridor (regional park)	- Low Priority (Floodway land expected to be dedicated as Environmental Reserve when subdivided - Barlow Area Structure Plan approved by City Council June 17, 1980)
	NOSE CREEK	
(N1)	Golf course adjacent to Beddington Rd.	- Low Priority (Part of the land expected to be dedicated as Environmental Reserve when subdivided)
(N2)	Regional open space adjacent to the creek between 80 Ave. and the current city limits	- Low Priority (Part of the land expected to be dedicated as Environmental Reserve when subdivided)
	WEST NOSE CREEK	
(WN1)	Regional open space adjacent to the creek between its confluence with Nose Creek and current N.W. city limits	- Low Priority (Part of the land expected to be dedicated as Environmental Reserve when subdivided - N.B. some land west of 4 Street N.W. and south of the creek has been dedicated as Environmental Reserve)

WEST NOSE CREEK

Regional park west of 4 St. N.W.: exact location and amount of land to be determined as part of Development Phase #3, Calgary North Policy Area.) - Low Priority

Note: 1. Acquisition of land is through subdivision, redesignation, and negotiations with land owners involved.

2. (Bx) denotes the areas of land acquisition priorities located adjacent to the Bow River on the land use concept plans. Land acquisition priorities for Nose and West Nose Creeks are also identified in a similar manner.

3. In the case of low priorities, if no appropriate actions are taken to acquire the land, opportunity to implement the regional open space system will be lost.

TABLE 4 COST ESTIMATES FOR LAND ACQUISITION (SOURCE: LAND DEPARTMENT)
(1981 Dollars)

SITES	OWNERSHIP	TOTAL LAND REQUIRED FOR PARKS APPROXIMATE	FLOODPLAIN LANDS APPROXIMATE	FLOODWAY LANDS (EXPECTED TO BE DEDICATED AS ENVIR. RESERVE) APPROXIMATE	TOTAL LAND TO BE ACQUIRED APPROXIMATE	ESTIMATED TOTAL COST (1981)
Carma, Klippert and Fournier lands in Bowmont Park (includes 38.92 acres/15.76 ha outside the floodplain)	Private	98.20 acres (39.77 ha)	27.29 acres (11.05 ha)	31.99 acres (12.96 ha)	98.20 acs. (39.77 ha)	
Urban-Reserve parcels in Shouldice Athletic Park	Private	40.00 acres (16.2 ha)	29.24 acres (11.84 ha)	10.76 acres (4.36 ha)	40.00 acs. (16.2 ha)	
Commac west of the Bow River and south of Southland Drive	Private	50 acres (20.24 ha)	15 acres (6.07 ha)	35 acres (14.17 ha)	50 acres (20.24 ha)	
C.I.L. land (east of the Bow River and south of Deerfoot Trail corridor)	Private	149 acres (60.35 ha)	51 acres (20.66 ha)	98 acres (39.69 ha)	51 acres (20.66 ha)	
Cominco Natural Area	Private	Natural Area 146 acres (59.13 ha)	67 acres (27.13 ha)	79 acres (32 ha)	146 acres (59.13 ha)	
Bow River SUBTOTAL	Private	483.20 acres (195.69 ha)	189.53 acs. (76.76 ha)	254.75 acs. (103.17 ha)	385.20 acs. (156.0 ha)	
Nose Creek: (golf course)	Private	125 acres (50.63 ha)	23 acres (9.32 ha)	Not Available	125 acres (50.63 ha)	
Nose Creek: (regional open space adjacent to the creek)	Private	382 acres (154.71 ha)	382 acres (154.71 ha)	Not Available	382 acres (154.71 ha)	
West Nose Creek: (regional park)	Private	80 acres (32.4 ha)	45 acres (18.22 ha)	Not Available	80 acres (32.4 ha)	
West Nose Creek: (regional open space adjacent to the creek)	Private	180 acres (72.9 ha)	180 acres (72.9 ha)	Not Available	180 acres (72.9 ha)	
TOTAL	Private	1250.2 acres (506.33 ha+)	819.53 acres (331.91ha+)	254.75 acres (103.17 ha+)	1152.2 acs (466.64 ha+)	$68,500,000.00+

NOTE: 1. Cost estimates assume acquisition of all relevant land in the floodway if these lands are not dedicated through subdivision as Environmental Reserve in accordance with The Planning Act, 1977.

2. The above lands will accommodate regional parks, golf courses, linear parks, walkways/pathways, and a limited number of natural areas. The remaining natural areas are given low priority and they are located entirely in the floodway and, therefore, are expected to be dedicated as Environmental Reserve when affected by subdivision.

3. Acquisition of land is through subdivision, redesignation, and negotiations with land owners involved. This does not preclude the dedication of Environmental Reserves in addition to lands mentioned in the above table.

4. Inflation factor must be taken into account in determining annual budget allocations to be submitted to City Council.

TABLE 5

PARKS PLANNING AND DEVELOPMENT
COST ESTIMATES (1981 DOLLARS)
(Source: Parks/Recreation Department)

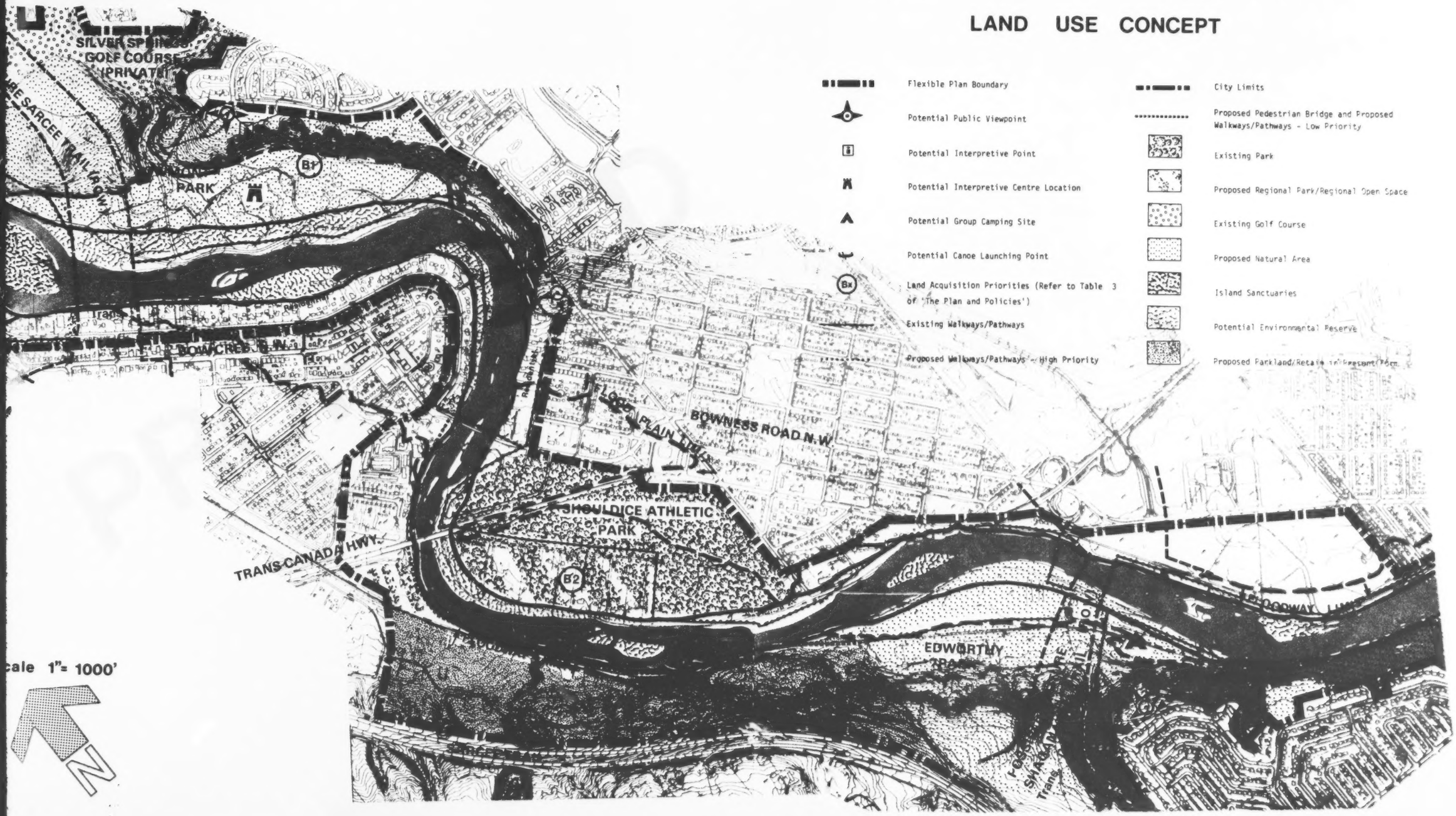
Master Planning	$ 289,000.00
Regional Parks/Regional Open Space/Golf Courses	
Trail Construction and Rehabilitation of Sunnyside Hill and Ogden-Millican Escarpment	80,000.00
Riverside area (south of Cominco) recreational regional park and expansion	4,248,000.00
Sandy Beach/River Park	572,000.00
Nose Creek golf course	5,900,000.00
West Nose Creek regional park	2,478,000.00
Nose Creek and West Nose Creek regional open space	5,310,000.00
Major Natural Areas (refer to Figure 1)	
B3 - The area commencing at approximately the 33 Avenue N.W. alignment, bound on the west, north and east by the west channel of Bowness lagoon and on the south by the riverine escarpment.	6,000.00
B5 - Edworthy Natural Areas	1,416,000.00
B8 - Riverine flatlands abutting Beaver Dam Flats Park	295,000.00
B9 - Cominco Natural Area	1,416,000.00
B11 - Riverine flatlands predominantly north of Conmac bridge on the left bank of the Bow River	118,000.00
Riverbank Walkway/Pathway System	
Walkways/Pathways	3,682,000.00
Pedestrian/Cyclist Bridges (8)	9,440,000.00
Self-guiding Nature Trails	47,000.00
Environmental Inventory	10,000.00
Public Awareness and General Information	
Socially Unacceptable Behaviour Public Relations Campaign	6-12,000.00
Maps/Brochures	17,000.00
Displays at Fort Calgary	24,000.00
Riverbank Walkway/Pathway Information	6,000.00
Clean-up Programs	1,416,000.00
Interpretive Centres (3)	1,062,000.00
Interpretive Points (11)	65,000.00
Orientation Dials (11)	65,000.00
Rest Stations (3)	35,000.00
Canoe Launching Sites (8)	85,000.00
Reclamation of Disturbed Areas	71,000.00
Environmental Impact Assessment	17,000.00
Signposting	14,000.00
Protection of Natural Features	12,000.00
TOTAL	$38,208,000.00*

*Note: Appropriate inflation factor must be taken into account.

POSSIBLE FUTURE SARCEE TRAIL
SILVER SPRINGS GOLF COURSE (PRIVATE)
PARK
B1
FLOODWAY LIMIT
FLOOD PLAIN LIMIT
85 STREET N.W.
BOW CREEK
Special Study Area
(East Scenic Acres Area
Structure Plan)
48 AVE. N.W.
BOWNESS PARK
EVENTUAL LINK TO BEARSPAW
TRANS-CANADA HWY.
Scale 1"= 1000'
N

CALGARY RIVER VALLEYS PLAN
PLATE 1 -BOW RIVER

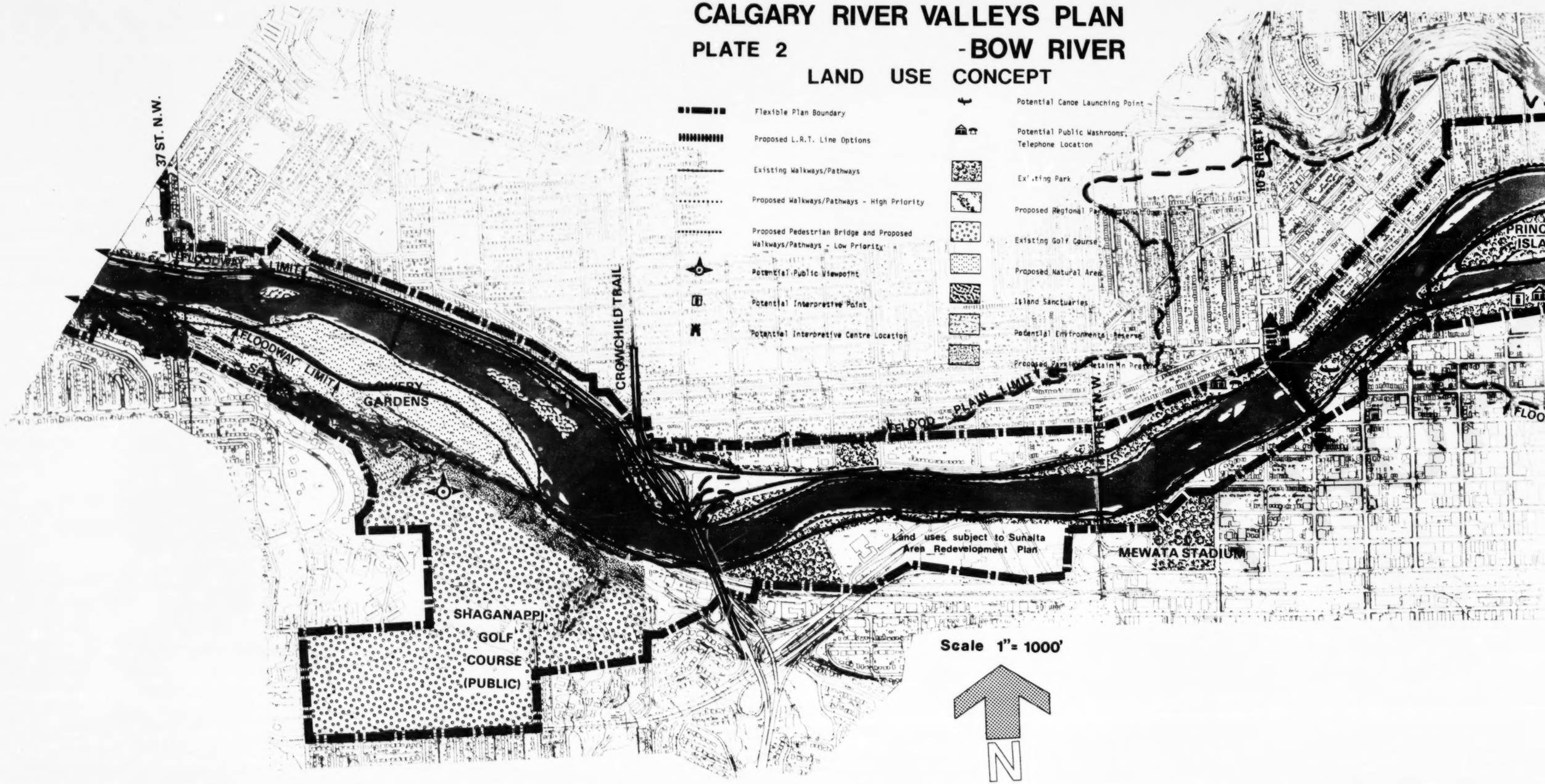
LAND USE CONCEPT



CALGARY RIVER VALLEYS PLAN

PLATE 2 - BOW RIVER

LAND USE CONCEPT



S PLAN
W RIVER
EPT

otential Canoe Launching Point

otential Public Washrooms,
elephone Location

xisting Park

roposed Regional Pa... Open Space

xisting Golf Course

roposed Natural Area

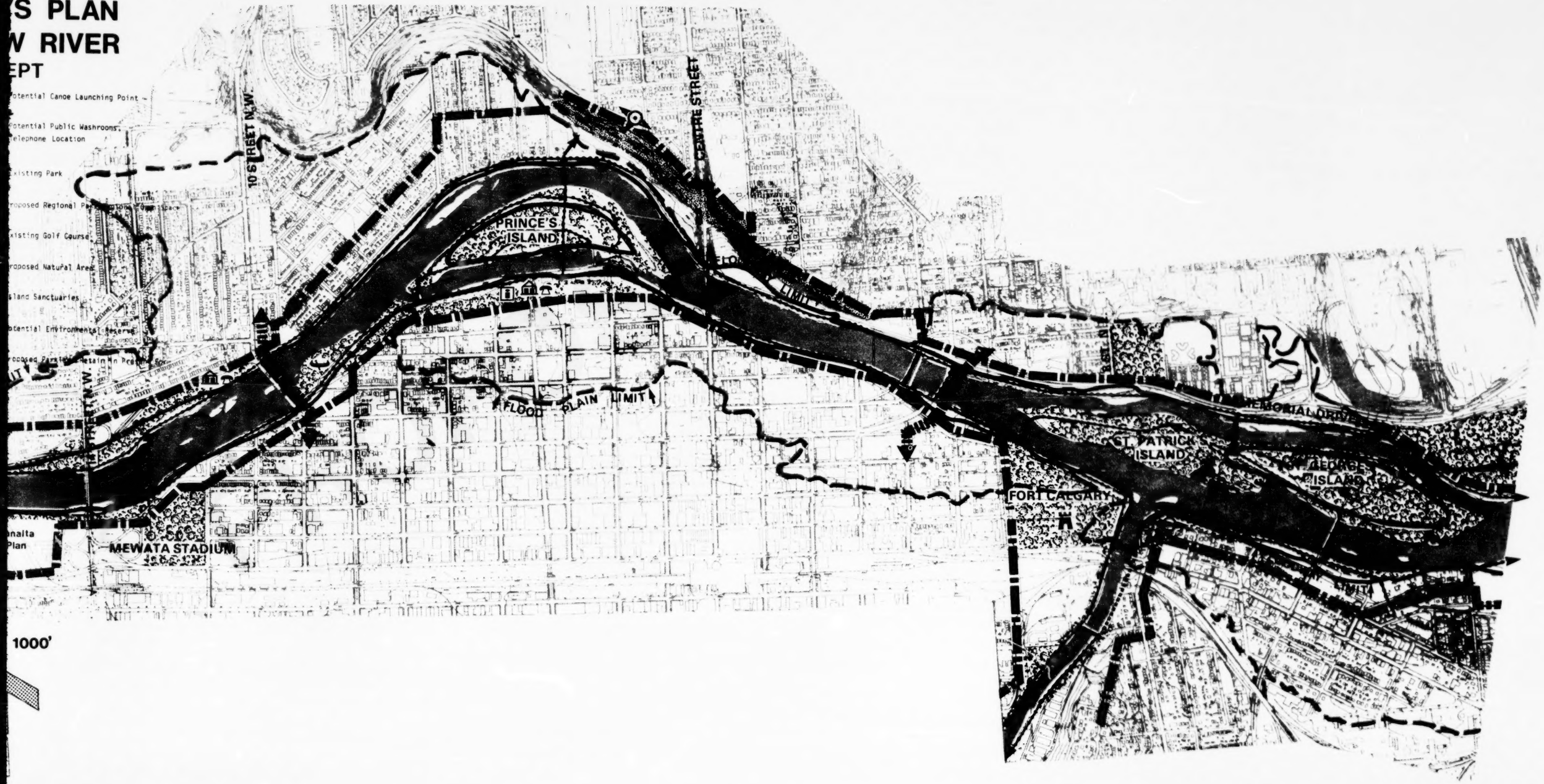
sland Sanctuaries

otential Environmental Reserve

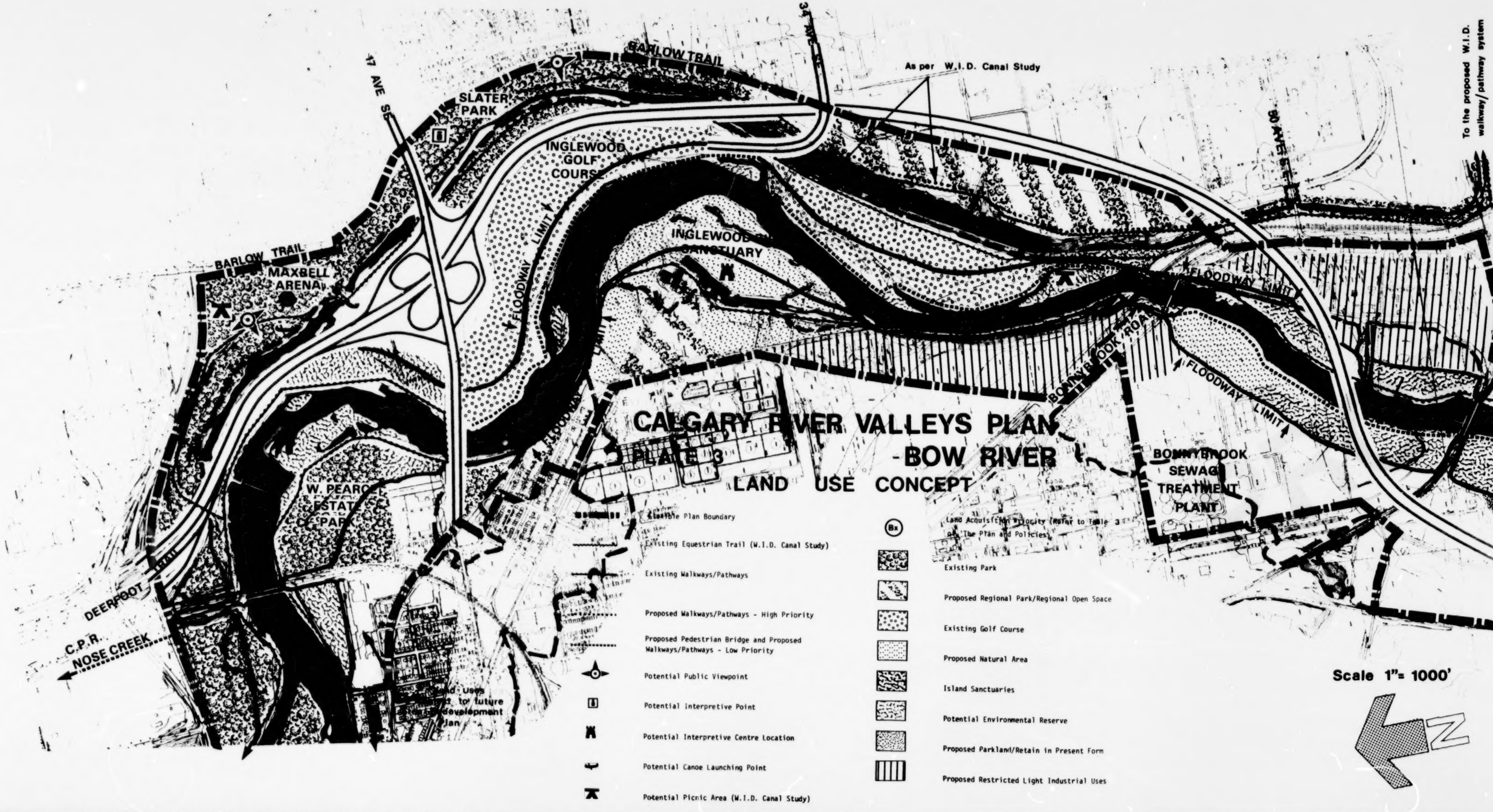
roposed Parks ... Retain In Present Form

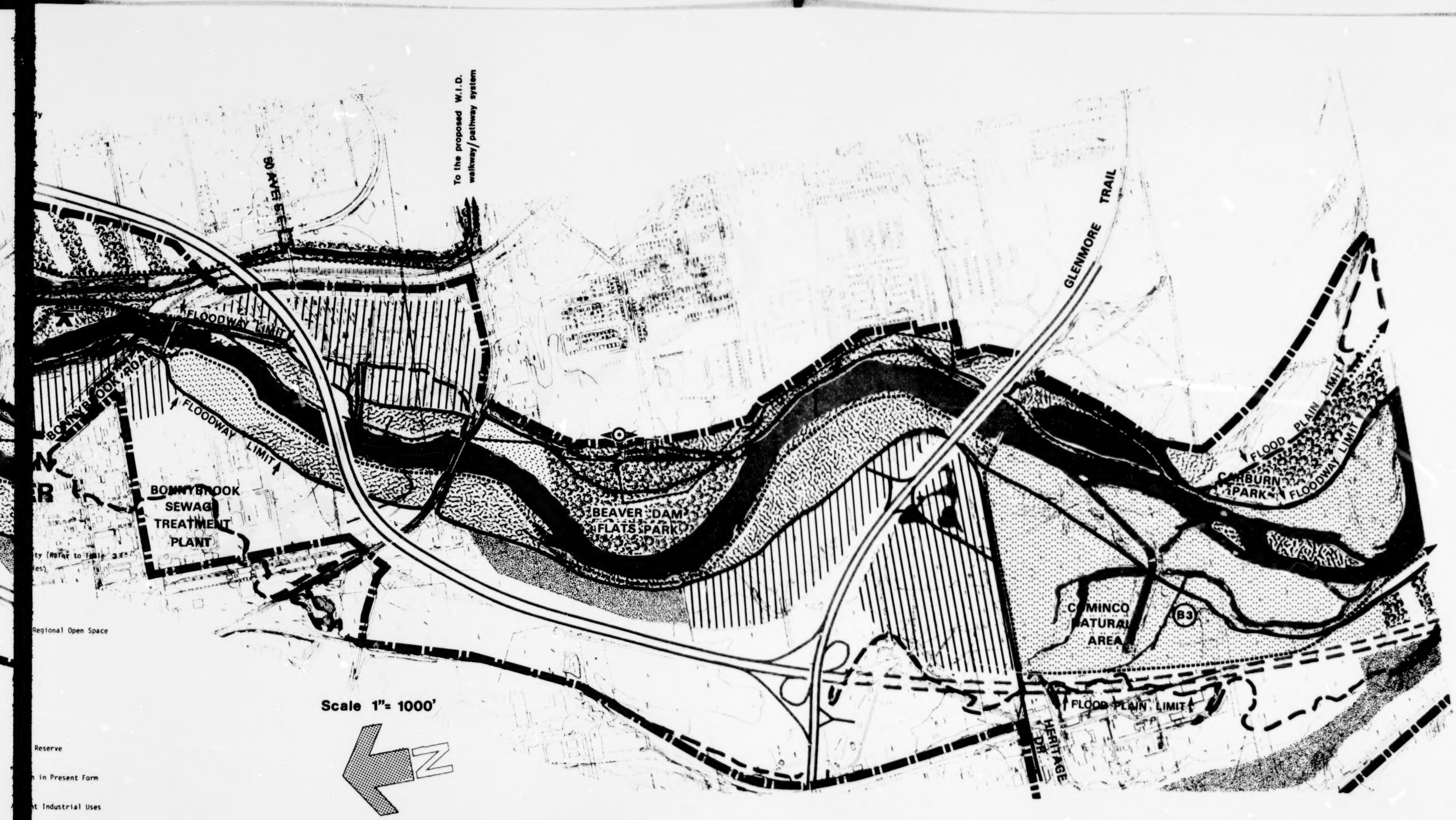
nalta
Plan

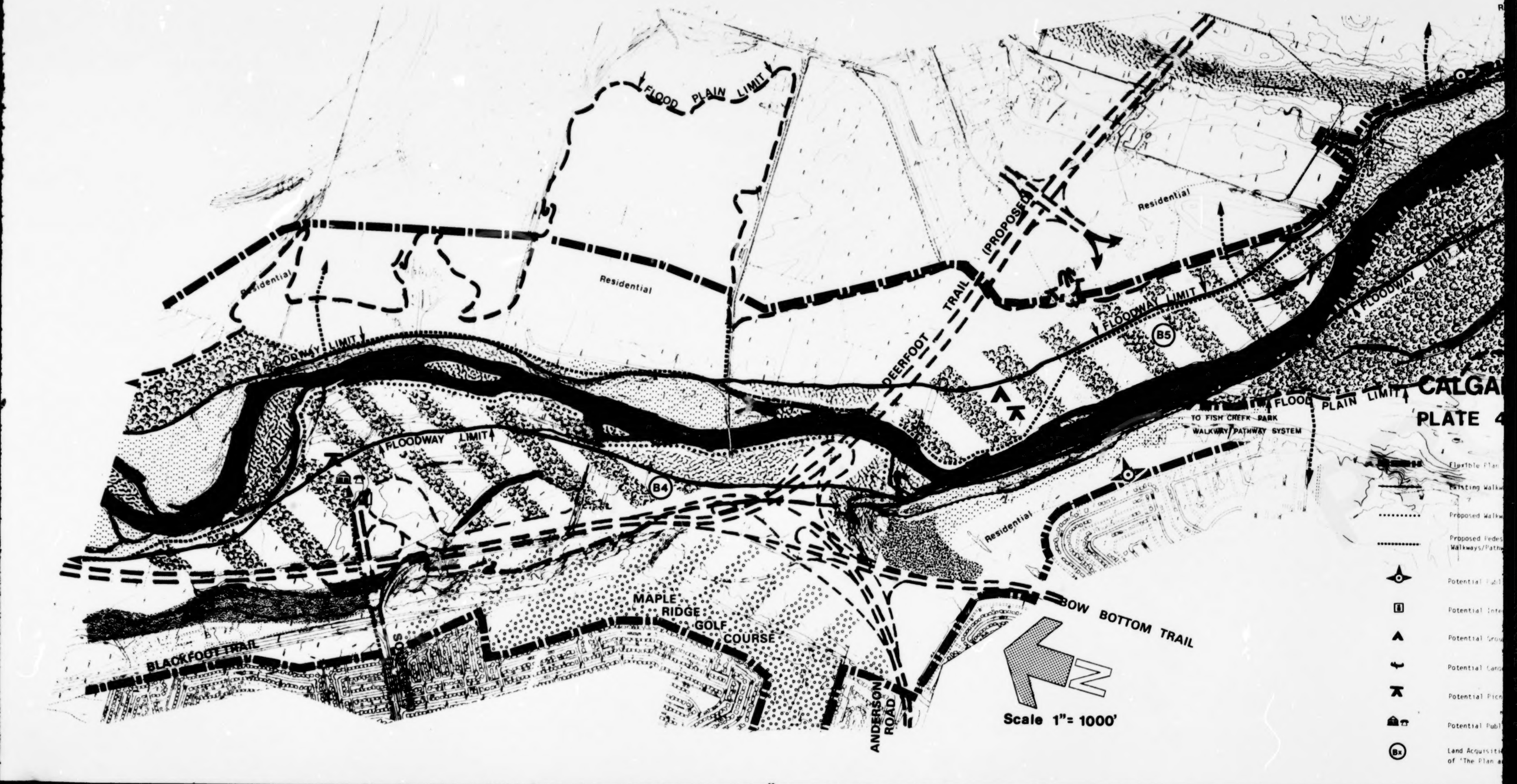
1000'



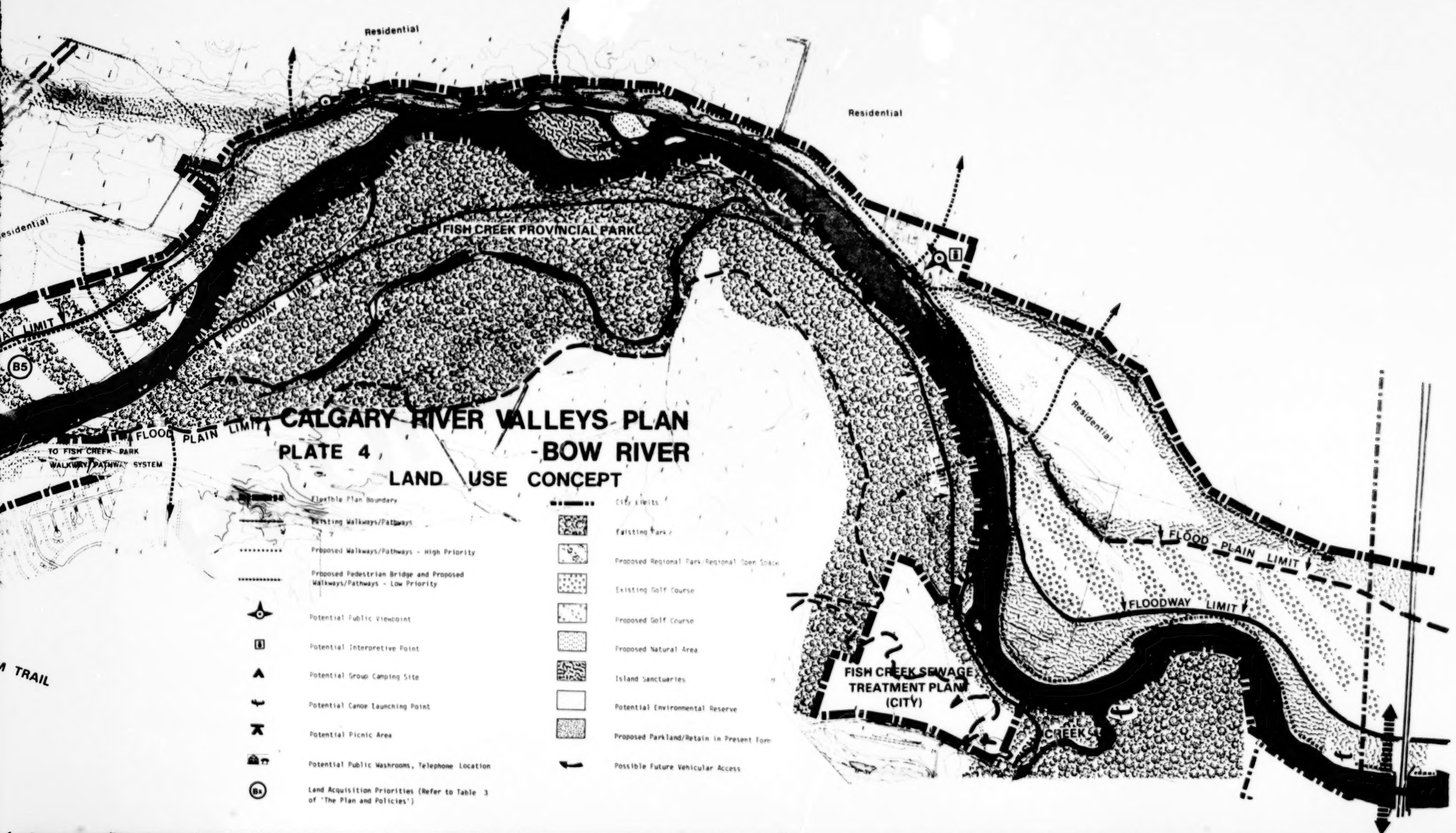
CALGARY RIVER VALLEYS PLAN
PLATE 3
-BOW RIVER
LAND USE CONCEPT

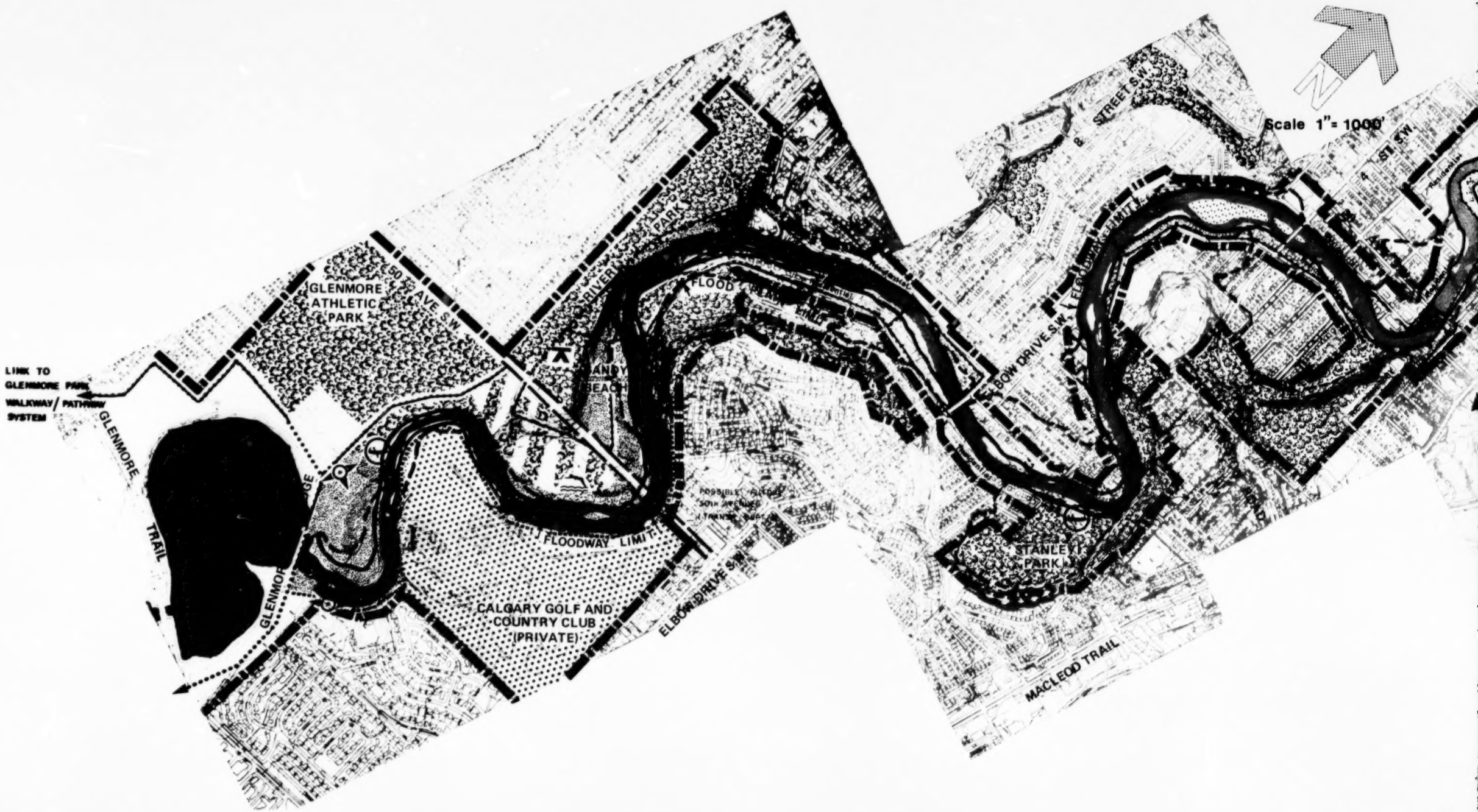



To the proposed W.I.D.
walkway/pathway system
60 AVE S.E.
FLOODWAY LIMIT
BOWNYBROOK ROAD
FLOODWAY LIMIT
BOWNYBROOK
SEWAGE
TREATMENT
PLANT
BEAVER DAM
FLATS PARK
GLENMORE TRAIL
FLOOD PLAIN LIMIT
FLOODWAY LIMIT
CARBURN
PARK
COMINCO
NATURAL
AREA
B3
FLOOD PLAIN LIMIT
HERITAGE
DR
Regional Open Space
Reserve
in Present Form
Industrial Uses
Scale 1"= 1000'
N

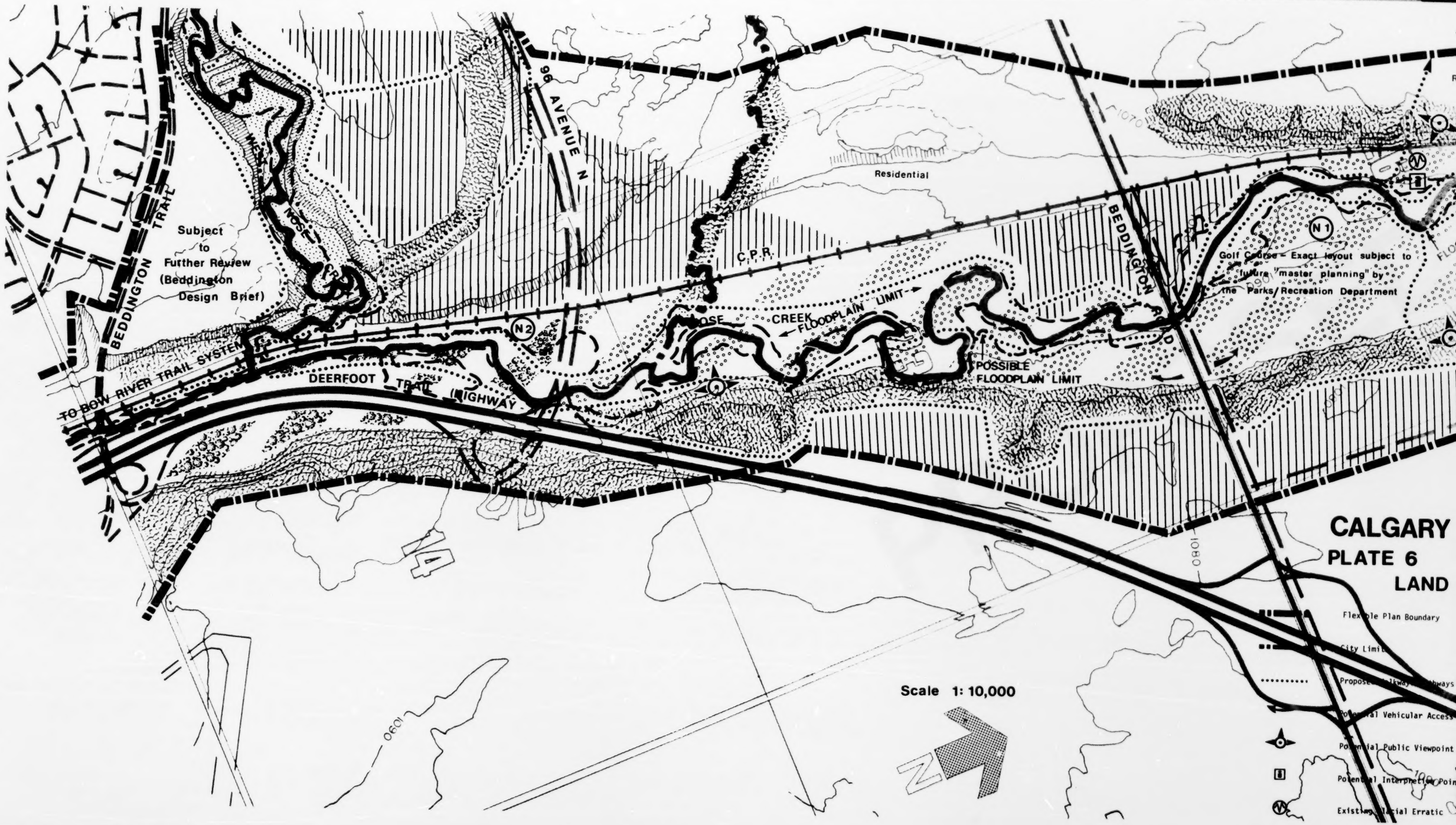

FLOOD PLAIN LIMIT
Residential
Residential
Residential
Residential
(PROPOSED) TRAIL
FLOODWAY LIMIT
FLOODWAY LIMIT
FLOODWAY LIMIT
B5
B4
DEERFOOT
TO FISH CREEK PARK
WALKWAY/PATHWAY SYSTEM
FLOOD PLAIN LIMIT
CALGA
PLATE 4
MAPLE
RIDGE
GOLF
COURSE
BLACKFOOT TRAIL
ANDERSON ROAD
BOW BOTTOM TRAIL
Scale 1"= 1000'
Flexible Plan
Existing Walkw
Proposed Walkw
Proposed Pedes
Walkways/Path
Potential Publ
Potential Inte
Potential Grou
Potential Land
Potential Picn
Potential Publ
Land Acquisiti
of 'The Plan a

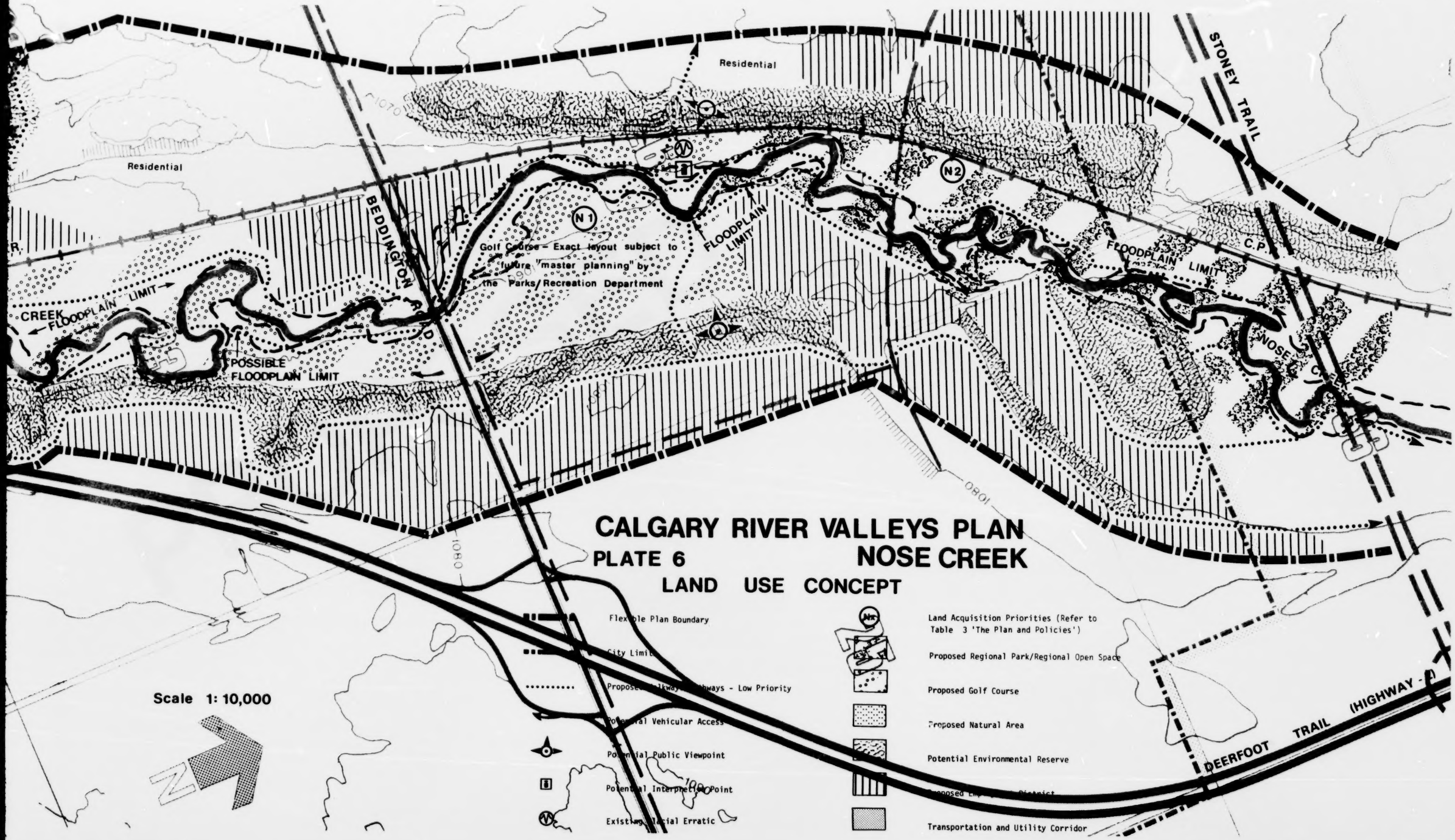
CALGARY RIVER VALLEYS PLAN
PLATE 4 - BOW RIVER
LAND USE CONCEPT




Scale 1" = 1000'
N
GLENMORE ATHLETIC PARK
50 AVE. S.W.
LINK TO GLENMORE PARK WALKWAY/ PATHWAY SYSTEM
GLENMORE TRAIL
GLENMORE BRIDGE
FLOOD
FLOODWAY LIMIT
CALGARY GOLF AND COUNTRY CLUB (PRIVATE)
ELBOW DRIVE S.W.
8 STREET S.W.
4 ST. S.W.
STANLEY PARK
MACLEOD TRAIL

N
Scale 1"= 1000'
8 STREET S.W.
4 ST. S.W.
17 AVENUE S.E.
1 STREET S.E.
2 STREET S.E.
12 AVENUE S.E.
FLOODWAY LIMIT
STAMPEDE GROUNDS
FORT CALGARY
ST. PATRICK'S ISLAND
Proposed Bus Barn Site
ELBOW DRIVE S.W.
FLOOD PLAIN
FLOODWAY
Residential
STANLEY PARK
MACLEOD TRAIL
CALGARY RIVER VALLEY PLAN
PLATE 5
LAND USE CONCEPT
Flexible Plan Boundary
L.R.T. Line
Existing Walkways/Pathways
Proposed Walkways/Pathways - High Priority
Proposed Pedestrian Bridge and Proposed Walkways/Pathways - Low Priority
Possible Future Lagoon for Swimming
Existing Canoe Launching Point
Potential Picnic Area
Potential Public Viewpoint
Potential Interpretive Centre Location
Potential Interpretive Point
Existing Park
Proposed Park/Open Space
Proposed Natural Area
Proposed Parkland/Retain in Present Form
Existing Private Recreation Area


BEDDINGTON TRAIL
MOSE CR.
96 AVENUE N
Subject to Further Review (Beddington Design Brief)
Residential
C.P.R.
BEDDINGTON ROAD
MOSE CREEK FLOODPLAIN LIMIT
POSSIBLE FLOODPLAIN LIMIT
Golf Course - Exact layout subject to future "master planning" by the Parks/Recreation Department
N1
N2
TO BOW RIVER TRAIL SYSTEM
DEERFOOT TRAIL HIGHWAY
1080
1090
1100
Scale 1: 10,000
CALGARY
PLATE 6
LAND
Flexible Plan Boundary
City Limit
Proposed Freeways/Highways
Potential Vehicular Access
Potential Public Viewpoint
Potential Interpretive Point
Existing Glacial Erratic


Residential
Residential
STONEY TRAIL
BEDDINGTON ROAD
N1
N2
Golf Course - Exact layout subject to future "master planning" by the Parks/Recreation Department
FLOODPLAIN LIMIT
FLOODPLAIN LIMIT
FLOODPLAIN LIMIT
CREEK
POSSIBLE FLOODPLAIN LIMIT
C.P.
NOSE CREEK
1070
1080
1090
1080
CALGARY RIVER VALLEYS PLAN
PLATE 6
NOSE CREEK
LAND USE CONCEPT
Flexible Plan Boundary
City Limit
Proposed Walkways/Bikeways - Low Priority
Potential Vehicular Access
Potential Public Viewpoint
Potential Interpretive Point
Existing Glacial Erratic
Land Acquisition Priorities (Refer to Table 3 'The Plan and Policies')
Proposed Regional Park/Regional Open Space
Proposed Golf Course
Proposed Natural Area
Potential Environmental Reserve
Proposed Environmental Reserve District
Transportation and Utility Corridor
Scale 1: 10,000
DEERFOOT TRAIL (HIGHWAY 2)

CALGARY RIVER VALLEYS PLAN

PLATE 7 WEST NOSE CREEK

LAND USE CONCEPT

Flexible Plan Boundary

City Limits

Proposed Public Transit Corridor

Proposed Walkways/Pathways - Low Priority

Potential Interpretive Point

Potential Public Viewpoint

Existing Glacial Erratic

Land Acquisition Priorities (Refer to Table of 'The Plan and Policies')

Proposed Regional Park

Proposed

Potential Environmental Reserve

Proposed Employment District

Transportation and Utility Corridor

Land Use As Per Calgary North Policy Report

(PROPOSED)

Subject to Special Study

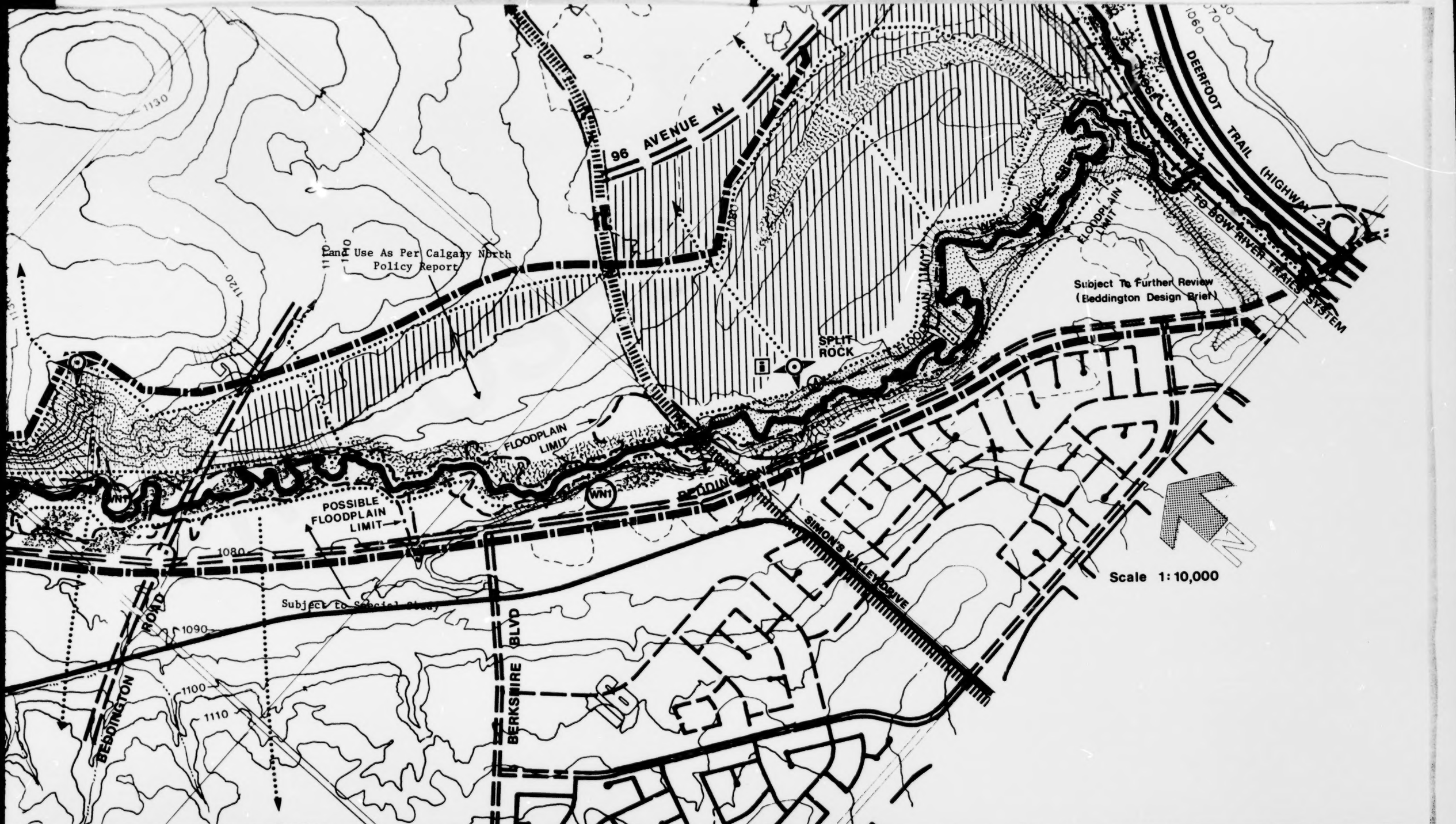
POSSIBLE FLOODPLAIN LIMIT

BEDDINGTON TRAIL

BEDDINGTON ROAD

WEST NOSE

1130 1120 1140 1146 1110 1100 1090 1080


96 AVENUE N
DEERFOOT TRAIL (HIGHWAY 2)
TO BOW RIVER TRAILS SYSTEM
WEST NOSE CREEK
FLOODPLAIN LIMIT
Land Use As Per Calgary North Policy Report
Subject To Further Review (Beddington Design Brief)
SPLIT ROCK
FLOODPLAIN LIMIT
FLOODPLAIN LIMIT
WN1
WN1
BEDDINGTON
POSSIBLE FLOODPLAIN LIMIT
1080
Subject to Special Study
1090
1100
1110
BEDDINGTON ROAD
BERKSHIRE BLVD
SIMON'S VALLEY DRIVE
1120
1130
1140
1150
1060
1070
Scale 1:10,000